

COMPOSITIONS, KITS, AND METHODS FOR  
IDENTIFICATION, ASSESSMENT, PREVENTION, AND  
THERAPY OF HUMAN PROSTATE CANCER

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## RELATED APPLICATIONS

The present application claims priority to U.S. provisional patent application serial no. 60/178,525, filed on January 24, 2000, U.S. provisional patent application serial no. 60/183,245, filed on February 17, 2000, U.S. provisional patent application serial no. 60/190,139, filed on March 16, 2000, U.S. provisional patent application serial no. 60/208,126, filed on May 31, 2000, 10 U.S. provisional patent application serial no. 60/219,705, filed on July 18, 2000, and U.S. provisional patent application serial no. 60/255,160, filed on December 13, 2000, all of which are expressly incorporated by reference.

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## FIELD OF THE INVENTION

The field of the invention is prostate cancer, including diagnosis, characterization, management, and therapy of prostate cancer.

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## BACKGROUND OF THE INVENTION

The increased number of cancer cases reported in the United States, and, indeed, around the world, is a major concern. Currently there are only a handful of treatments available for specific types of cancer, and these provide no absolute guarantee of success. In order to be most effective, these treatments require not only an early detection of the malignancy, but also a reliable assessment of the severity of the malignancy.

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Carcinoma of the prostate (PCA) is the most frequently diagnosed cancer in men in the United States, and is the second leading cause of male cancer deaths (Karp *et al.*, 1996, *Cancer Res.* 56:5547-5556). The acute susceptibility of this organ to cancer in men is not understood. Skenes glands represent a tissue in females that is homologous to the male prostate, but not a site where significant neoplastic transformation is observed.

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An unusual challenge presented by prostate cancer is that most prostate tumors do not represent life threatening conditions. Projections from autopsy surveys indicate that as many as 11

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million American men have prostate cancer (Dhom, 1983, *J. Cancer Res. Clin. Oncol.*, 106:210-218). These figures are consistent with clinical observations of prostate carcinomas, which normally exhibit a slow and lingering course of progression. Such disease progression results in relatively few prostate tumors developing into cases of clinical concern during the lifetime of the patient. If, upon detection with available methods, the cancer appears well-differentiated, organ-confined and focal, treatment normally can not extend the life expectancy of older patients.

Unfortunately, the prostate carcinomas that are progressive in nature frequently have already metastasized by the time of clinical detection with available methods. Survival rates for individuals with metastatic prostate cancer are quite low. Between these two extremes are patients with prostate tumors that will metastasize during their lifetimes, but have not yet done so. For these patients, surgical removal of the prostate is curative and extends life expectancy. Therefore, accurate determination of which group a newly diagnosed patient falls into is critical in determining optimal treatment and patient survival.

Currently there is at least one early and noninvasive test available to the physician for detecting asymptomatic disease. The presence of Prostate Specific Antigen (PSA) can be measured with relative ease from blood samples using standard antibody-based detection kits. Abnormally high levels of this antigen in a patient's serum indicate a likelihood of prostate disease, possibly either a carcinoma, Benign Prostatic Hyperplasia (BPH) or prostatitis. In the majority of cases, PSA elevation is due to BPH or prostatitis rather than carcinoma.

Although clinical and pathologic stage and histological grading systems (e.g., Gleason's) have been used to indicate prognosis for groups of patients based on the degree of tumor differentiation or the type of glandular pattern (Carter and Coffey, In: J. P. Karr and H. Yamanak (eds.), *Prostate Cancer: The Second Tokyo Symposium*, pp. 19-27, New York: Elsevier, 1989.; Diamond *et al.*, *J. Urol.*, 128: 729-734, 1982), these systems do not adequately predict the progression rate of the cancer. While the use of computer-system image analysis of histologic sections of primary lesions for "nuclear roundness" has been suggested as an aide in the management of individual patients (Diamond *et al.*, 1982, *J. Urol.*, 128:729-734), this method is of limited use in studying the progression of the disease.



The analysis of DNA content/ploidy using flow cytometry and FISH has been demonstrated to have utility predicting prostate cancer aggressiveness (Pearsons *et al.*, 1993, *J. Urol.*, 150:120-125; Macoska *et al.*, 1994, *Cancer Res.*, 54: 3824-3830; Visakorpi *et al.*, 1994, *Am. J. Pathol.*, 145:1-7; Takahashi *et al.*, 1994, *Cancer Res.*, 54:3574-3579; Alcaraz *et al.*, *Cancer Res.*, 55:3998-4002, 1994), but these methods are expensive, time-consuming, and the latter methodology requires the construction of centromere-specific probes for analysis. There also exist specific nuclear matrix proteins whose expression has been reported to be associated with prostate cancer. However, these protein markers apparently do not distinguish between BPH and prostate cancer (Partin *et al.*, 1993, *Cancer Res.*, 53:744-746). Unfortunately, markers that cannot distinguish between benign and malignant prostate tumors are of little value.

It would therefore be beneficial to provide specific methods and reagents for the diagnosis, staging, prognosis, monitoring, and treatment of diseases associated with prostate cancer, or to indicate a predisposition to such for preventative medicine.

#### SUMMARY OF THE INVENTION

The invention relates to a method of assessing whether a patient is afflicted with prostate cancer. The method of the present invention comprises the step of comparing the level of expression of a marker (listed within Tables 1-1 to 6) in a patient sample with the normal level of expression of the marker in a control, *e.g.*, a sample from a patient without prostate cancer. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with prostate cancer.

In one embodiment of the methods of the present invention, the sample comprises cells obtained from the patient. The cells may be found in a prostate tissue sample collected, for example, by a prostate tissue biopsy or histology section, or a bone marrow biopsy. In another embodiment, the patient sample is a prostate-associated body fluid. Such fluids include, for example, blood fluids, lymph, urine, prostatic fluid and semen.

In accordance with the methods of the present invention, the presence and/or level of expression of the marker in a sample can be assessed, for example, by detecting the presence in the sample of:

- a protein or protein fragment corresponding to the marker (*e.g.* using a reagent, such as an antibody, an antibody derivative, or an antibody fragment, which binds specifically with the protein or protein fragment)
- a metabolite which is produced directly (*i.e.*, catalyzed) or indirectly by a protein corresponding to the marker
- a transcribed polynucleotide (*e.g.* an mRNA or a cDNA), or fragment thereof, having at least a portion with which the marker is substantially homologous (*e.g.* by contacting a mixture of transcribed polynucleotides obtained from the sample with a substrate having one or more of the markers listed within Tables 1-1 to 6 fixed thereto at selected positions)
- a transcribed polynucleotide or fragment thereof, wherein the polynucleotide anneals with the marker under stringent hybridization conditions.

The methods of the present invention are useful for further diagnosing patients having an identified prostate mass or symptoms associated with prostate cancer, *e.g.* abnormally high levels of PSA. The methods of the present invention can further be of particular use with patients having an enhanced risk of developing prostate cancer (*e.g.*, patients having a familial history of prostate cancer and patients identified as having a mutant oncogene). The methods of the present invention may further be of particular use in monitoring the efficacy of treatment of a prostate cancer patient (*e.g.* the efficacy of chemotherapy).

All cancers have staging schemes that are used to describe the degree to which the cancer has progressed. The TNM staging approach assigns the primary tumor (T) to one of four stages (and to additional substages within these categories) based on the size and location of the primary tumor within the prostate. A T1 designation indicates a microscopic tumor which cannot be detected by a digital rectal exam. A T2NO designation refers to a tumor palpable upon a digital rectal exam but are contained within the prostate capsule ( local disease). In all forms of stage T3 disease the tumors have extended through the prostate capsule into the surrounding connective tissue or seminal vesicles. The T4 designation refers to tumors that have escaped from the prostate and can be found in the pelvic region. The N stage refers to whether the primary tumor has spread to the regional lymph nodes (pelvic lymph nodes). The M stage refers to whether the tumor cells have metastasized to distant sites.

5 The methods of the present invention may be performed using a plurality (*e.g.* 2, 3, 5, or 10 or more) of markers. According to a method involving a plurality of markers, the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-1 to 6 is compared with the normal level of expression of each of the plurality of markers in samples of the same type obtained from control humans not afflicted with prostate cancer. A significantly altered level of expression in the sample of one or more of the markers listed in Tables 1-1 to 6, or some combination thereof, relative to that marker's corresponding normal levels, is an indication that the patient is afflicted with prostate cancer. The markers of Tables 1-1 to 6 may also be used in combination with known prostate cancer markers in the methods of the present invention, *e.g.* PSA analysis.

In a preferred method of assessing whether a patient is afflicted with prostate cancer (*e.g.*, new detection ("screening"), detection of recurrence, reflex testing), the method comprises comparing:

- 15 a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-1 to 6, and
- b) the normal level of expression of the marker in a control non-prostate cancer sample.

A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with prostate cancer.

20 The invention further relates to a method of assessing the efficacy of a therapy for inhibiting prostate cancer in a patient. This method comprises comparing:

- a) expression of a marker in a first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed within Tables 1-1 to 6, and
- 25 b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy.

A significant difference between the level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting prostate cancer in the patient.

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It will be appreciated that in this method the “therapy” may be any therapy for treating prostate cancer including, but not limited to, chemotherapy, immunotherapy, gene therapy, radiation therapy and surgical removal of tissue. Thus, the methods of the invention may be used to evaluate a patient before, during and after therapy, for example, to evaluate the reduction in tumor  
5 burden.

The present invention therefore further comprises a method for monitoring the progression of prostate cancer in a patient, the method comprising:

a) detecting in a patient sample at a first time point, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-1  
10 to 6;

b) repeating step a) at a subsequent time point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of prostate cancer in the patient.

The present invention also includes a method for assessing the aggressiveness or  
15 indolence of prostate cancer (*e.g.*, staging), the method comprising comparing:

a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-1 to 6, and

b) the normal level of expression of the marker in a control sample.

A significant difference between the level of expression in the sample and the normal level is an  
20 indication that the cancer is aggressive or indolent.

The present invention further includes a method for determining whether prostate cancer has metastasized or is likely to metastasize in the future, the method comprising comparing:

a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-1 to 6 and

25 b) the normal level (or non-metastatic level) of expression of the marker in a control sample.

A significant difference between the level of expression in the patient sample and the normal level (or non-metastatic level) is an indication that the prostate cancer has metastasized or is likely to metastasize in the future.

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The invention also includes a method of selecting a composition for inhibiting prostate cancer in a patient. This method comprises the steps of:

- a) obtaining a sample comprising cancer cells from the patient;
- b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
- c) comparing expression of a marker listed within Tables 1-1 to 6 in each of the aliquots; and
- d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

In addition, the invention includes a method of inhibiting prostate cancer in a patient. This method comprises the steps of:

- a) obtaining a sample comprising cancer cells from the patient;
- b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
- c) comparing expression of a marker listed within Tables 1-1 to 6 in each of the aliquots; and
- d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

The invention also includes a kit for assessing whether a patient is afflicted with prostate cancer. This kit comprises reagents for assessing expression of a marker listed within Tables 1-1 to 6.

In another aspect, the invention relates to a kit for assessing the suitability of each of a plurality of compounds for inhibiting a prostate cancer in a patient. The kit comprises a reagent for assessing expression of a marker listed within Tables 1-1 to 6, and may also comprise a plurality of compounds.

In another aspect, the invention relates to a kit for assessing the presence of prostate cancer cells. This kit comprises an antibody, wherein the antibody binds specifically with a protein or protein fragment corresponding to a marker listed within Tables 1-1 to 6. The kit may also

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comprise a plurality of antibodies, wherein the plurality binds specifically with a protein or protein fragment corresponding to a different marker listed within Tables 1-1 to 6.

The invention also includes a kit for assessing the presence of prostate cancer cells, wherein the kit comprises a nucleic acid probe. The probe binds specifically with a transcribed polynucleotide corresponding to a marker listed within Tables 1-1 to 6. The kit may also comprise a plurality of probes, wherein each of the probes binds specifically with a transcribed polynucleotide corresponding to a different marker listed within Tables 1-1 to 6.

The invention further relates to a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with prostate cancer. The method comprises isolating a protein or protein fragment corresponding to a marker listed within Tables 1-1 to 6, immunizing a mammal using the isolated protein or protein fragment, isolating splenocytes from the immunized mammal, fusing the isolated splenocytes with an immortalized cell line to form hybridomas, and screening individual hybridomas for production of an antibody which specifically binds with the protein or protein fragment, to isolate the hybridoma. The invention also includes an antibody produced by this method.

The invention further includes a method of assessing the prostate carcinogenic potential of a test compound. This method comprises the steps of:

- a) maintaining separate aliquots of prostate cells in the presence and absence of the test compound; and
- b) comparing expression of a marker in each of the aliquots.

The marker is selected from those listed within Tables 1-1 to 6. A significant difference between the level of expression of the marker in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses prostate carcinogenic potential.

Additionally, the invention includes a kit for assessing the prostate carcinogenic potential of a test compound. The kit comprises prostate cells and a reagent for assessing expression of a marker in each of the aliquots. The marker is selected from those listed within Tables 1-1 to 6.

5 The invention further relates to a method of treating a patient afflicted with prostate cancer. This method comprises providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker listed within Tables 1-1 to 6, which is overexpressed in prostate cancer. In an alternative method, expression of a gene corresponding to a marker selected from the markers listed in Tables 1-1 to 6 which is underexpressed in prostate cancer, is increased.

10 The invention includes a method of inhibiting prostate cancer in a patient at risk for developing prostate cancer. This method comprises inhibiting or increasing expression (or overexpression) of a gene corresponding to a marker listed within Tables 1-1 to 6, that is either overexpressed or underexpressed, respectively, in prostate cancer.

It will be appreciated that the methods and kits of the present invention may also include known cancer markers including known prostate cancer markers. It will further be appreciated that the methods and kits may be used to identify cancers other than prostate cancer.

15 DETAILED DESCRIPTION OF THE INVENTION

The invention relates to newly discovered correlations between expression of certain markers and the cancerous state of prostate cells. It has been discovered that the level of expression of individual markers and combinations of markers described herein correlates with the presence of prostate cancer or a pre-malignant condition in a patient. Methods are provided for detecting the presence of prostate cancer in a sample, the absence of prostate cancer in a sample, the stage of a prostate cancer, the metastatic potential of a prostate cancer, the indolence or aggressiveness of the cancer, and other characteristics of prostate cancer that are relevant to prevention, diagnosis, characterization and therapy of prostate cancer in a patient.

25 Definitions

As used herein, each of the following terms has the meaning associated with it in this section.

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The articles "a" and "an" are used herein to refer to one or to more than one (*i.e.* to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element.

5 A "marker" is a naturally-occurring polymer corresponding to at least one of the nucleic acids listed within Tables 1-1 to 6. For example, markers include, without limitation, sense and anti-sense strands of genomic DNA (*i.e.* including any introns occurring therein), RNA generated by transcription of genomic DNA (*i.e.* prior to splicing), RNA generated by splicing of RNA transcribed from genomic DNA, and proteins generated by translation of spliced RNA (*i.e.* including proteins both before and after cleavage of normally cleaved regions such as  
10 transmembrane signal sequences). As used herein, "marker" may also include a cDNA made by reverse transcription of an RNA generated by transcription of genomic DNA (including spliced RNA).

As used herein a polynucleotide "corresponds to" another (a first) polynucleotide if it is related to the first polynucleotide by any of the following relationships: The second  
15 polynucleotide comprises the first polynucleotide and the second polynucleotide encodes a gene product; 2) The second polynucleotide is 5' or 3' to the first polynucleotide in cDNA, RNA, genomic DNA, or fragment of any of these polynucleotides. For example, a second polynucleotide may be a fragment of a gene that includes the first and second polynucleotides. The first and second polynucleotides are related in that they are components of the gene coding for a gene  
20 product, such as a protein or antibody. However, it is not necessary that the second polynucleotide comprises or overlaps with the first polynucleotide to be encompassed within the definition of "corresponding to" as used herein. For example, the first polynucleotide may be a fragment of a 3' untranslated region of the second polynucleotide. The first and second polynucleotide may be fragments of a gene coding for a gene product. The second polynucleotide may be an exon of the  
25 gene while the first polynucleotide may be an intron of the gene; 3) The second polynucleotide is the complement of the first polynucleotide.

The term "probe" refers to any molecule which is capable of selectively binding to a specifically intended target molecule, for example a marker of the invention. Probes can be either synthesized by one skilled in the art, or derived from appropriate biological preparations. For

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purposes of detection of the target molecule, probes may be specifically designed to be labeled, as described herein. Examples of molecules that can be utilized as probes include, but are not limited to, RNA, DNA, cDNA, proteins, antibodies, and organic monomers.

5 A "prostate-associated" body fluid is a fluid which, when in the body of a patient, contacts or passes through prostate cells or into which cells or proteins shed from prostate cells are capable of passing. Exemplary prostate-associated body fluids include blood fluids, semen, prostate fluid, lymph and urine.

The "normal" level of expression of a marker is the level of expression of the marker in prostate cells or prostate-associated body fluids of a patient, *e.g.* a human, not afflicted with  
10 prostate cancer.

"Over-expression" and "under-expression" of a marker refer to expression of the marker of a patient at a greater or lesser level, respectively, than normal level of expression of the marker (*e.g.* at least two-fold greater or lesser level).

As used herein, the term "promoter/regulatory sequence" means a nucleic acid  
15 sequence which is required for expression of a gene product operably linked to the promoter/regulatory sequence. In some instances, this sequence may be the core promoter sequence and in other instances, this sequence may also include an enhancer sequence and other regulatory elements which are required for expression of the gene product. The promoter/regulatory sequence may, for example, be one which expresses the gene product in a tissue-specific manner.

20 A "constitutive" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell under most or all physiological conditions of the cell.

An "inducible" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced  
25 in a living human cell substantially only when an inducer which corresponds to the promoter is present in the cell.

A "tissue-specific" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be

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produced in a living human cell substantially only if the cell is a cell of the tissue type corresponding to the promoter.

5 A "transcribed polynucleotide" is a polynucleotide (*e.g.* an RNA, a cDNA, or an analog of one of an RNA or cDNA) which is complementary to or homologous with all or a portion of a mature RNA made by transcription of a genomic DNA corresponding to a marker of the invention and normal post-transcriptional processing (*e.g.* splicing), if any, of the transcript.

"Complementary" refers to the broad concept of sequence complementarity between regions of two nucleic acid strands or between two regions of the same nucleic acid strand. It is known that an adenine residue of a first nucleic acid region is capable of forming specific hydrogen  
10 bonds ("base pairing") with a residue of a second nucleic acid region which is antiparallel to the first region if the residue is thymine or uracil. Similarly, it is known that a cytosine residue of a first nucleic acid strand is capable of base pairing with a residue of a second nucleic acid strand which is antiparallel to the first strand if the residue is guanine. A first region of a nucleic acid is complementary to a second region of the same or a different nucleic acid if, when the two regions  
15 are arranged in an antiparallel fashion, at least one nucleotide residue of the first region is capable of base pairing with a residue of the second region. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, when the first and second portions are arranged in an antiparallel fashion, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residues of the first portion are  
20 capable of base pairing with nucleotide residues in the second portion. More preferably, all nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion.

"Homologous" as used herein, refers to nucleotide sequence similarity between two regions of the same nucleic acid strand or between regions of two different nucleic acid strands.  
25 Homology between two regions is expressed in terms of the proportion of nucleotide residue positions of the two regions that are occupied by the same nucleotide residue. By way of example, a region having the nucleotide sequence 5'-ATTGCC-3' and a region having the nucleotide sequence 5'-TATGGC-3' share 50% homology. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, at least about 50%, and preferably at

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least about 75%, at least about 90%, or at least about 95% of the nucleotide residue positions of each of the portions are occupied by the same nucleotide residue. More preferably, all nucleotide residue positions of each of the portions are occupied by the same nucleotide residue.

5 A marker is "fixed" to a substrate if it is covalently or non-covalently associated with the substrate such that the substrate can be rinsed with a fluid (*e.g.* standard saline citrate, pH 7.4) without a substantial fraction of the marker dissociating from the substrate.

As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature.

10 Expression of a marker in a patient is "significantly" higher than the normal level of expression of a marker if the level of expression of the marker is greater than the normal level by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Alternately, expression of the marker in the patient can be considered "significantly" higher or lower than the normal level of expression if the level of expression is at least about two, and preferably at least about three, four,  
15 or five times, higher or lower, respectively, than the normal level of expression of the marker.

Prostate cancer is "inhibited" if at least one symptom of the cancer is alleviated, terminated, slowed, or prevented. As used herein, prostate cancer is also "inhibited" if recurrence or metastasis of the cancer is reduced, slowed, delayed, or prevented.

20 A kit is any manufacture (*e.g.* a package or container) comprising at least one reagent, *e.g.* a probe, for specifically detecting a marker of the invention, the manufacture being promoted, distributed, or sold as a unit for performing the methods of the present invention.

### Description

25 The present invention is based, in part, on identification of markers which are differentially expressed in prostate cancer cells when compared with normal (*i.e.* non- cancerous) prostate cells. The markers of the invention correspond to DNA, RNA, and polypeptide molecules which can be detected in one or both of normal and cancerous prostate cells. The presence, absence, or level of expression of one or more of these markers in prostate cells is herein correlated with the cancerous state of the tissue. The invention thus includes compositions, kits, and methods

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for assessing the cancerous state of prostate cells (*e.g.* cells obtained from a human, cultured human cells, archived or preserved human cells and *in vivo* cells).

The compositions, kits, and methods of the invention have the following uses, among others:

- 5           1)     assessing whether a patient is afflicted with prostate cancer;
- 2)     assessing the stage of prostate cancer in a human patient;
- 3)     assessing the grade of prostate cancer in a patient;
- 4)     assessing the benign or malignant nature of prostate cancer in a patient;
- 5)     assessing the metastatic potential of prostate cancer in a patient;
- 10          6)     assessing the histological type of neoplasm (*e.g. Adenocarcinoma*) associated  
            with prostate cancer in a patient;
- 7)     assessing the indolent or aggressive nature of prostate cancer in a patient;
- 8)     making an isolated hybridoma which produces an antibody useful for  
            assessing whether a patient is afflicted with prostate cancer;
- 15          9)     assessing the presence of prostate cancer cells;
- 10)    assessing the efficacy of one or more test compounds for inhibiting prostate  
            cancer in a patient;
- 11)    assessing the efficacy of a therapy for inhibiting prostate cancer in a patient;
- 12)    monitoring the progression of prostate cancer in a patient;
- 20          13)    selecting a composition or therapy for inhibiting prostate cancer in a patient;
- 14)    treating a patient afflicted with prostate cancer;
- 15)    inhibiting prostate cancer in a patient;
- 16)    assessing the prostate carcinogenic potential of a test compound; and
- 17)    inhibiting prostate cancer in a patient at risk for developing prostate cancer.

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The invention thus includes a method of assessing whether a patient is afflicted with prostate cancer which includes assessing whether the patient has pre-metastasized prostate cancer. This method comprises comparing the level of expression of a marker in a patient sample and the normal level of expression of the marker in a control, *e.g.*, a non-prostate cancer sample. A

significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with prostate cancer. The marker is selected from the group consisting of the markers listed within Tables 1-1 to 6. Although one or more molecules corresponding to the markers listed within Tables 1-1 to 6 may have been described by others, the significance of the level of expression of these markers with regard to the cancerous state of prostate cells has not previously been recognized.

The invention also encompasses polynucleotides which differ from that of the polynucleotides described herein, but which produce the same phenotypic effect, such as an allelic variant. These altered, but phenotypically equivalent polynucleotides are referred to as "equivalent nucleic acids." This invention also encompasses polynucleotides characterized by changes in non-coding regions that do not alter the polypeptide produced therefrom when compared to the polynucleotide herein. This invention further encompasses polynucleotides, which hybridize to the polynucleotides of the subject invention under conditions of moderate or high stringency. Alternatively, the polynucleotides are at least 85%, or at least 90%, or more preferably, greater or equal to 95% identical as determined by a sequence alignment program when run under default parameters.

The following summarizes the Tables of the present invention:

Table 1-1 shows the sequences expressed at least five-fold higher in at least one of five prostate stage T2NO tumors, or at least three-fold higher in at least two of five prostate stage T2NO tumors, when compared with the average expression level in BPH tissue. The average expression level in BPH tissue is the mean of four specimens.

Table 1-2 shows the sequences expressed at least five-fold higher in at least one of five prostate stage T2NO tumors, or at least three-fold higher in at least two of five prostate stage T2NO tumors, when compared with the average expression level in normal prostate tissue. The average expression level in the normal prostate tissue is the mean of four specimens.

Table 1-3 is a merged list of Tables 1-1 and 1-2.

Table 1-4 shows sequences which meet at least one of the following six criteria:

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- Sequences expressed at least ten-fold higher in at least one of five prostate stage T2NO tumors, when compared with the average expression level in normal prostate tissue.
  - Sequences expressed at least five-fold higher in at least three of five prostate stage T2NO tumors, when compared with the average expression level in normal prostate tissue.
  - Sequences expressed at least three-fold higher in five of five prostate stage T2NO tumors, when compared with the average expression level in normal prostate tissue.
  - Sequences expressed at least ten-fold higher in at least one of five prostate stage T2NO tumors, when compared with the average expression level in BPH.
  - Sequences expressed at least five-fold higher in at least three of five prostate stage T2NO tumors, when compared with the average expression level in BPH.
  - Sequences expressed at least three-fold higher in five of five prostate stage T2NO tumors, when compared with the average expression level in BPH.
- Table 1-5 shows sequences which meet at least one of the following three criteria:
- Sequences found in Table 1-4 which show overexpression relative to both normal prostate and BPH.
  - Sequences found in Table 1-4 which show evidence of a prostate restricted tissue distribution. An estimate of the tissue distribution for specific ESTs was made through the use of sequence clustering software. Both the UniGene clustering of the dbEST database and Pangea clustering of sequence databases were used. The tissue of origin for each of the ESTs comprising a cluster was collected. Clusters were identified which met the criteria of at least five ESTs in the cluster, and with at least 75% of the ESTs from prostate libraries.
  - Sequences found in Table 1-4 which show evidence of a translation product with a membrane bound or secreted sub-cellular location based on the partition of the corresponding mRNA with membrane bound polysomes.

Table 2-1 shows sequences expressed at least three-fold higher in at least two of the six prostate stage T3NO tumors or at least five-fold higher in at least one of the six prostate stage T3NO tumors, when compared with the average expression levels of four BPH tissue specimens.

5 Table 2-2 shows sequences from Table 2-1 which are overexpressed by at least three-fold in three or more of six T3NO tumors or at least five-fold in two or more of six T3NO tumors, relative to BPH. Sequences that show restricted prostate tissue distribution or show evidence of a translational product with a membrane bound or secreted sub-cellular localization based on the partitioning of the corresponding mRNA with membrane bound polysomes, are preferred.

10 Table 2-3 shows sequences from Table 2-1 which are at least five-fold overexpressed in at least three of six T3NO tumors or at least ten-fold overexpressed in at least two of six T3NO tumors relative to BPH. Sequences that show restricted prostate tissue distribution or show evidence of a translational product with a membrane bound or secreted sub-cellular localization based on the partitioning of the corresponding mRNA with membrane bound polysomes, are preferred.

15 Tables 2-4, 2-5 and 2-6 show the expression levels for sequences in T2NO and T3NO tumors with poor clinical outcome. These are compared with the average expression levels of sequences from T2NO tumors with good clinical outcome. "Good clinical outcome" is defined as the patient remaining disease free for at least five years or more following surgery. "Poor clinical outcome" is defined as the patient suffering disease recurrence following surgery within a period of less than five years.

The sequences included in Table 2-4 are expressed at least three-fold higher in any one of four poor clinical outcome tumors compared to the mean expression in five good clinical outcome tumors.

25 Table 2-5 shows sequences from Table 2-4 which showed at least three-fold higher expression in at least two of four poor clinical outcome tumors compared to the average expression in five good clinical outcome tumors.

Table 2-6 shows sequences from Table 2-4 which showed at least five-fold higher expression in at least two of four poor clinical outcome tumors compared to the average expression

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in five good clinical outcome tumors. Some sequences in this Table show a restricted prostate distribution.

Tables 2-7, 2-8 and 2-9 show the expression levels for sequences in T2NO tumors with good clinical outcome. These are compared to the average expression levels of sequences from T2NO and T3NO tumors with poor clinical outcome.

Table 2-7 shows sequences which showed at least three-fold higher expression in at least one of five good clinical outcome tumors when compared with the average expression of four poor clinical outcome tumors.

Table 2-8 shows sequences from Table 2-7 which showed at least three-fold higher expression in at least two of five good clinical outcome tumors compared to the average expression in four poor clinical outcome tumors.

Table 2-9 shows sequences from Table 2-7 which showed at least five-fold higher expression in at least two of five good clinical outcome tumors compared to the average expression in four poor clinical outcome tumors. Some sequences in Table 2-9 also show a restricted prostate tissue distribution.

Tables 2-10, 2-11 and 2-12 show the expression levels for sequences in the prostate tumor cell lines DU145, LNCaP and PC3. These are compared to the expression levels of sequences from the normal prostate epithelial cell strain, PrEC.

Table 2-10 shows sequences expressed at least three-fold higher in three of three, five-fold higher in at least two of three, or ten-fold higher in at least one of three prostate cancer cell lines relative to the expression in the normal PrEC cell strain.

Table 2-11 shows sequences from Table 2-10 which are expressed at least five-fold higher in at least two of the prostate cancer cell lines relative to the expression in the normal PrEC cell strain.

Table 2-12 shows sequences from Table 2-10 which are expressed at least ten-fold higher in at least two of the prostate cancer cell lines relative to the expression in the normal PrEC cell strain.

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Table 3-1 shows 7511 nucleotide sequences that were identified through subtracted library experiments described herein. Table 3-2 includes sequences for the markers of Table 3-1 which are found in non-public databases (*e.g.*, PREPATNUC).

Table 3-3 shows 2543 nucleotide sequences that were identified through subtracted library experiments described herein. Table 3-4 includes sequences for the markers of Table 3-3 which are found in non-public databases (*e.g.*, PREPATNUC).

Table 3-5 shows 5857 nucleotide sequences that encode secreted proteins and were identified through subtracted library experiments described herein. Table 3-6 includes sequences for the markers of Table 3-5 which are found in non-public databases (*e.g.*, PREPATNUC).

Table 4-1 shows 7653 nucleotide sequences that were identified through subtracted library experiments described herein. Table 4-2 includes sequences for the markers of Table 4-1 which are found in non-public databases (*e.g.*, PREPATNUC).

Tables 5-1 and 5-2 show 116 and 123 nucleotide sequences (respectively) that were identified through transcriptional profiling experiments described herein. The nucleotide sequences were expressed in androgen-independent prostate tumors at levels that are 10-fold or greater than the levels of the same nucleotide sequence in androgen-dependant prostate tumors. Comparisons were made at 0, 7, and 14 days of androgen deprivation (*e.g.*, castration).

Table 6 shows the accession number ("Acc. No.") and corresponding GenBank GI number ("GI Number") for the markers of the present invention. One skilled in the art may thus obtain from the Tables of the invention, both GenBank accession number as well as the GenBank GI number for a marker of the present invention, thereby identifying the nucleotide and/or polypeptide sequence of that marker.

Any marker or combination of markers listed within Tables 1-1 to 6, as well as any known markers in combination with the markers set forth within Tables 1-1 to 6, may be used in the compositions, kits, and methods of the present invention. In general, it is preferable to use markers for which the difference between the level of expression of the marker in prostate cancer cells or prostate-associated body fluids and the level of expression of the same marker in normal prostate cells or prostate-associated body fluids is as great as possible. Although this difference can be as small as the limit of detection of the method for assessing expression of the marker, it is preferred

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that the difference be at least greater than the standard error of the assessment method, and preferably a difference of at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, 10-, 15-, 20-, 25-, 100-, 500-, 1000-fold or greater.

It will be appreciated that patient samples containing prostate cells may be used in the methods of the present invention. In these embodiments, the level of expression of the marker can be assessed by assessing the amount (*e.g.* absolute amount or concentration) of the marker in a prostate cell sample, *e.g.*, prostate tissue sample obtained from a patient. The cell sample can, of course, be subjected to a variety of well-known post-collection preparative and storage techniques (*e.g.* fixation, storage, freezing, lysis, homogenization, DNA or RNA extraction, ultrafiltration, concentration, evaporation, centrifugation, etc.) prior to assessing the amount of the marker in the sample.

It will also be appreciated that certain markers correspond to proteins which are secreted from prostate cells (*i.e.* one or both of normal and cancerous cells) to the extracellular space surrounding the cells. These markers are preferably used in certain embodiments of the compositions, kits, and methods of the invention, owing to the fact that the protein corresponding to each of these markers can be detected in a prostate-associated body fluid sample. In addition, preferred *in vivo* techniques for detection of a protein corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the protein. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

Although not every marker corresponding to a secreted protein is indicated as such herein, it is a simple matter for the skilled artisan to determine whether any particular marker corresponds to a secreted protein. In order to make this determination, the protein corresponding to a marker is expressed in a test cell (*e.g.* a cell of a prostate cell line), extracellular fluid is collected, and the presence or absence of the protein in the extracellular fluid is assessed (*e.g.* using a labeled antibody which binds specifically with the protein).

The following is an example of a method which can be used to detect secretion of a protein corresponding to a marker of the invention. About  $8 \times 10^5$  293T cells are incubated at 37°C

in wells containing growth medium (Dulbecco's modified Eagle's medium {DMEM} supplemented with 10% fetal bovine serum) under a 5% (v/v) CO<sub>2</sub>, 95% air atmosphere to about 60-70% confluence. The cells are then transfected using a standard transfection mixture comprising 2 micrograms of DNA comprising an expression vector encoding the protein and 10 microliters of LipofectAMINE™ (GIBCO/BRL Catalog no. 18342-012) per well. The transfection mixture is maintained for about 5 hours, and then replaced with fresh growth medium and maintained in an air atmosphere. Each well is gently rinsed twice with DMEM which does not contain methionine or cysteine (DMEM-MC; ICN Catalog no. 16-424- 54). About 1 milliliter of DMEM-MC and about 50 microcuries of Trans-<sup>35</sup>S™ reagent (ICN Catalog no. 51006) are added to each well. The wells are maintained under the 5% CO<sub>2</sub> atmosphere described above and incubated at 37°C for a selected period. Following incubation, 150 microliters of conditioned medium is removed and centrifuged to remove floating cells and debris. The presence of the protein in the supernatant is an indication that the protein is secreted.

Examples of prostate-associated body fluids include blood fluids (*e.g.* whole blood, blood serum, blood having platelets removed therefrom, lymph, urine, prostatic fluid and semen. Many prostate-associated body fluids (*i.e.* usually excluding urine) can have prostate cells therein, particularly when the prostate cells are cancerous, and, more particularly, when the prostate cancer is metastasizing. Cell-containing fluids which can contain prostate cancer cells include, but are not limited to, whole blood, blood having platelets removed therefrom, lymph, prostatic fluid, and semen. Thus, the compositions, kits, and methods of the invention can be used to detect expression of markers corresponding to proteins having at least one portion which is displayed on the surface of cells which express it. Although the proteins having at least one cell-surface portion are not set forth herein, it is a simple matter for the skilled artisan to determine whether the protein corresponding to any particular marker comprises a cell-surface protein. For example, immunological methods may be used to detect such proteins on whole cells, or well known computer-based sequence analysis methods (*e.g.* the SIGNALP program; Nielsen *et al.*, 1997, *Protein Engineering* 10:1-6) may be used to predict the presence of at least one extracellular domain (*i.e.* including both secreted proteins and proteins having at least one cell-surface domain).

Expression of a marker corresponding to a protein having at least one portion which is displayed on the surface of a cell which expresses it may be detected without necessarily lysing the cell (*e.g.* using a labeled antibody which binds specifically with a cell-surface domain of the protein).

Expression of a marker of the invention may be assessed by any of a wide variety of well known methods for detecting expression of a transcribed molecule or protein. Non-limiting examples of such methods include immunological methods for detection of secreted, cell-surface, cytoplasmic, or nuclear proteins, protein purification methods, protein function or activity assays, nucleic acid hybridization methods, nucleic acid reverse transcription methods, and nucleic acid amplification methods.

In another preferred embodiment, expression of a marker is assessed using an antibody (*e.g.* a radio-labeled, chromophore-labeled, fluorophore-labeled, or enzyme-labeled antibody), an antibody derivative (*e.g.* an antibody conjugated with a substrate or with the protein or ligand of a protein-ligand pair {*e.g.* biotin-streptavidin} ), or an antibody fragment (*e.g.* a single-chain antibody, an isolated antibody hypervariable domain, etc.) which binds specifically with a protein or protein fragment corresponding to the marker, such as the protein encoded by the open reading frame corresponding to the marker or such a protein which has undergone all or a portion of its normal post-translational modification.

In another preferred embodiment, expression of a marker is assessed by preparing mRNA/cDNA (*i.e.* a transcribed polynucleotide) from cells in a patient sample, and by hybridizing the mRNA/cDNA with a reference polynucleotide which is a complement of a polynucleotide comprising the marker, and fragments thereof. cDNA can, optionally, be amplified using any of a variety of polymerase chain reaction methods prior to hybridization with the reference polynucleotide. Expression of one or more markers can likewise be detected using quantitative PCR to assess the level of expression of the marker(s). Alternatively, any of the many known methods of detecting mutations or variants (*e.g.* single nucleotide polymorphisms, deletions, etc.) of a marker of the invention may be used to detect occurrence of a marker in a patient.

In a related embodiment, a mixture of transcribed polynucleotides obtained from the sample is contacted with a substrate having fixed thereto a polynucleotide complementary to or homologous with at least a portion (*e.g.* at least 7, 10, 15, 20, 25, 30, 40, 50, 100, 500, or more

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nucleotide residues) of a marker of the invention. If polynucleotides complementary to or homologous with a marker of the invention are differentially detectable on the substrate (*e.g.* detectable using radioactivity, different chromophores or fluorophores), are fixed to different selected positions, then the levels of expression of a plurality of markers can be assessed

5 simultaneously using a single substrate (*e.g.* a "gene chip" microarray of polynucleotides fixed at selected positions). When a method of assessing marker expression is used which involves hybridization of one nucleic acid with another, it is preferred that the hybridization be performed under stringent hybridization conditions.

Because the compositions, kits, and methods of the invention rely on detection of a  
10 difference in expression levels of one or more markers of the invention, it is preferable that the level of expression of the marker is significantly greater than the minimum detection limit of the method used to assess expression in at least one of normal prostate cells and cancerous prostate cells.

It is understood that by routine screening of additional patient samples using one or more of the markers of the invention, it will be realized that certain of the markers are over- or  
15 underexpressed in cancers of various types, including specific prostate cancers, as well as other cancers such as ovarian cancers. For example, it will be confirmed that some of the markers of the invention are over-expressed in most (*i.e.* 50% or more) or substantially all (*i.e.* 80% or more) of prostate cancer. Furthermore, it will be confirmed that certain of the markers of the invention are associated with prostate cancer of various stages.

It will be appreciated that as a greater number of patient samples are assessed for expression of the markers of the invention and the outcomes of the individual patients from whom the samples were obtained are correlated, it will also be confirmed that altered expression of certain of the markers of the invention are strongly correlated with malignant cancers and that altered expression of other markers of the invention are strongly correlated with benign tumors. The  
20 compositions, kits, and methods of the invention are thus useful for characterizing one or more of the stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype and benign/malignant nature of prostate cancer in patients.

When the compositions, kits, and methods of the invention are used for characterizing one or more of the stage, grade, histological type, metastatic potential, indolent vs.

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aggressive phenotype and benign/malignant nature of prostate cancer in a patient, it is preferred that the marker or panel of markers of the invention is selected such that a positive result is obtained in at least about 20%, and preferably at least about 40%, 60%, or 80%, and more preferably in substantially all patients afflicted with a prostate cancer of the corresponding stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype or benign/malignant nature. Preferably, the marker or panel of markers of the invention is selected such that a positive predictive value (PPV) of greater than about 10% is obtained for the general population.

When a plurality of markers of the invention are used in the compositions, kits, and methods of the invention, the level of expression of each marker in a patient sample can be compared with the normal level of expression of each of the plurality of markers in non-cancerous samples of the same type, either in a single reaction mixture (*i.e.* using reagents, such as different fluorescent probes, for each marker or a mixture of similarly labeled probes to access a plurality of markers that are fixed to a single substrate at different positions) or in individual reaction mixtures corresponding to one or more of the markers. In one embodiment, a significantly enhanced level of expression of more than one of the plurality of markers in the sample, relative to the corresponding normal levels, is an indication that the patient is afflicted with prostate cancer. When a plurality of markers is used, it is preferred that 2, 3, 4, 5, 8, 10, 12, 15, 20, 30, or 50 or more individual markers be used, wherein fewer markers are preferred.

In order to maximize the sensitivity of the compositions, kits, and methods of the invention (*i.e.* by interference attributable to cells of non-prostate origin in a patient sample), it is preferable that the marker of the invention used therein be a marker which has a restricted tissue distribution, *e.g.*, normally not expressed in non-prostate tissue.

Only a small number of markers are known to be associated with prostate cancers (*e.g.* PSA, PSMA, PAP, PCA3, PCTA-1, PSCA and STEAP). These markers are not, of course, included among the markers of the invention, although they may be used together with one or more markers of the invention in a panel of markers, for example. It is well known that certain types of genes, such as oncogenes, tumor suppressor genes, growth factor-like genes, protease-like genes, and protein kinase-like genes are often involved with development of cancers of various types. Thus, among the markers of the invention, use of those which correspond to proteins which

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resemble known proteins encoded by known oncogenes and tumor suppressor genes, and those which correspond to proteins which resemble growth factors, proteases, and protein kinases are preferred.

Known oncogenes and tumor suppressor genes include, for example, *abl*, *abr*,  
 5 *akT2NO*, *apc*, *bcl2 $\alpha$* , *bcl2 $\beta$* , *bcl3*, *bcr*, *brca1*, *brca2*, *cbl*, *ccnd1*, *cdc42*, *cdk4*, *crk- II*, *csf1r/fms*, *dbl*,  
*dcc*, *dpc4/smad4*, *e-cad*, *e2f1/rbap*, *egfr/erbB-1*, *elk1*, *elk3*, *eph*, *erg*, *ets1*, *ets2*, *fer*, *fgr/src2*,  
*fli1/ergb2*, *fos*, *fps/fes*, *fra1*, *fra2*, *fyn*, *hck*, *hek*, *her2/erbB- 2/neu*, *her3/erbB-3*, *her4/erbB-4*, *hras1*,  
*hsT2NO*, *hstf1*, *igfbp2*, *ink4a*, *ink4b*, *inT2NO/fgf3*, *jun*, *junb*, *jund*, *kip2*, *kit*, *kras2a*, *kras2b*, *lck*, *lyn*,  
*mas*, *max*, *mcc*, *mdm2*, *met*, *mlh1*, *mmp10*, *mos*, *msh2*, *msh3*, *msh6*, *myb*, *myba*, *mybb*, *myc*, *mycl1*,  
 10 *mycn*, *nf1*, *nf2*, *nme2*, *nras*, *p53*, *pdgfb*, *phb*, *pim1*, *pms1*, *pms2*, *ptc*, *pten*, *raf1*, *rap1a*, *rb1*, *rel*, *ret*,  
*ros1*, *ski*, *src1*, *tall*, *tgfb2*, *tgfb3*, *tgfb3*, *thra1*, *thrb*, *tiam1*, *timp3*, *tjp1*, *tp53*, *trk*, *vav*, *vhl*, *vil2*,  
*waf1*, *wnt1*, *wnT2NO*, *wt1*, and *yes1* (Hesketh, 1997, In: *The Oncogene and Tumour Suppressor Gene Facts Book*, 2nd Ed., Academic Press; Fishel *et al.*, 1994, *Science* 266:1403-1405).

Known growth factors include platelet-derived growth factor alpha, platelet-derived  
 15 growth factor beta (simian sarcoma viral {v-sis} oncogene homolog), thrombopoietin  
 (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development  
 factor), erythropoietin, B cell growth factor, macrophage stimulating factor 1 (hepatocyte growth  
 factor-like protein), hepatocyte growth factor (hepapoietin A), insulin-like growth factor 1  
 (somatomedia C), hepatoma-derived growth factor, amphiregulin (schwannoma-derived growth  
 20 factor), bone morphogenetic proteins 1, 2, 3, 3 beta, and 4, bone morphogenetic protein 7  
 (osteogenic protein 1), bone morphogenetic protein 8 (osteogenic protein 2), connective tissue  
 growth factor, connective tissue activation peptide 3, epidermal growth factor (EGF),  
 teratocarcinoma-derived growth factor 1, endothelin, endothelin 2, endothelin 3, stromal cell-  
 derived factor 1, vascular endothelial growth factor (VEGF), VEGF-B, VEGF-C, placental growth  
 25 factor (vascular endothelial growth factor-related protein), transforming growth factor alpha,  
 transforming growth factor beta 1 and its precursors, transforming growth factor beta 2 and its  
 precursors, fibroblast growth factor 1 (acidic), fibroblast growth factor 2 (basic), fibroblast growth  
 factor 5 and its precursors, fibroblast growth factor 6 and its precursors, fibroblast growth factor 7  
 (keratinocyte growth factor), fibroblast growth factor 8 (androgen-induced), fibroblast growth factor

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9 (glia-activating factor), pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1), brain-derived neurotrophic factor, and recombinant glial growth factor 2.

Known proteases include interleukin-1 beta convertase and its precursors, Mch6 and its precursors, Mch2 isoform alpha, Mch4, Cpp32 isoform alpha, Lice2 gamma cysteine protease, 5 Ich-1S, Ich-1L, Ich-2 and its precursors, TY protease, matrix metalloproteinase 1 (interstitial collagenase), matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase), matrix metalloproteinase 7 (matrilysin), matrix metalloproteinase 8 (neutrophil collagenase), matrix metalloproteinase 12 (macrophage elastase), matrix metalloproteinase 13 (collagenase 3), metallopeptidase 1, cysteine-rich metalloprotease (disintegrin) and its precursors, 10 subtilisin-like protease Pc8 and its precursors, chymotrypsin, snake venom-like protease, cathepsin I, cathepsin D (lysosomal aspartyl protease), stromelysin, aminopeptidase N, plasminogen, tissue plasminogen activator, plasminogen activator inhibitor type II, and urokinase-type plasminogen activator.

Known protein kinases include DAP kinase, serine/threonine protein kinases NIK, 15 PK428, Krs-2, SAK, and EMK, interferon-inducible double stranded RNA dependent protein kinase, FAST kinase, AIM1, IPL1-like midbody-associated protein kinase-1, NIMA-like protein kinase 1 (NLK1), the cyclin-dependent kinases (cdk1-10), checkpoint kinase Chk1, Nek3 protein kinase, BMK1 beta kinase, Clk1, Clk2, Clk3, extracellular signal-regulated kinases 1, 3, and 6, cdc28 protein kinase 1, cdc28 protein kinase 2, pLK, Myt1, c-Jun N-terminal kinase 2, Cam kinase 20 1, the MAP kinases, insulin-stimulated protein kinase 1, beta-adrenergic receptor kinase 2, ribosomal protein S6 kinase, kinase suppressor of ras-1 (KSR1), putative serine/threonine protein kinase Prk, PkB kinase, cAMP-dependent protein kinase, cGMP-dependent protein kinase, type II cGMP-dependent protein kinase, protein kinases Dyrk2, Dyrk3, and Dyrk4, Rho-associated coiled-coil containing protein kinase p160ROCK, protein tyrosine kinase t-Ror1, Ste20-related kinases, 25 cell adhesion kinase beta, protein kinase 3, stress-activated protein kinase 4, protein kinase Zpk, serine kinase hPAK65, dual specificity mitogen-activated protein kinases 1 and 2, casein kinase I gamma 2, p21-activated protein kinase Pak1, lipid-activated protein kinase PRK2, focal adhesion kinase, dual-specificity tyrosine-phosphorylation regulated kinase, myosin light chain kinase, serine kinases SRPK2, TESK1, and VRK2, B lymphocyte serine/threonine protein kinase, stress-activated

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protein kinases JNK1 and JNK2, phosphorylase kinase, protein tyrosine kinase Tec, Jak2 kinase, protein kinase Ndr, MEK kinase 3, SHB adaptor protein (a Src homology 2 protein), agammaglobulinaemia protein-tyrosine kinase (Atk), protein kinase ATR, guanylate kinase 1, thrombopoietin receptor and its precursors, DAG kinase epsilon, and kinases encoded by oncogenes or viral oncogenes such as v-fgr (Gardner-Rasheed), v-abl (Abelson murine leukemia viral oncogene homolog 1), v-arg (Abelson murine leukemia viral oncogene homolog, Abelson-related gene), v-fes and v-fps (feline sarcoma viral oncogene and Fujinami avian sarcoma viral oncogene homologs), proto-oncogene *c-cot*, oncogene *pim-1*, and oncogene *mas1*.

It is recognized that the compositions, kits, and methods of the invention will be of particular utility to patients having an enhanced risk of developing prostate cancer and their medical advisors. Patients recognized as having an enhanced risk of developing prostate cancer include, for example, patients having a familial history of prostate cancer, patients identified as having a mutant oncogene (*i.e.* at least one allele), and patients determined through any other established medical criteria to be at risk for cancer or other malignancy.

The level of expression of a marker in normal (*i.e.* non-cancerous) human prostate tissue can be assessed in a variety of ways. In one embodiment, this normal level of expression is assessed by assessing the level of expression of the marker in a portion of prostate cells which appears to be non-cancerous and by comparing this normal level of expression with the level of expression in a portion of the prostate cells which is suspected of being cancerous. For example, the normal level of expression of a marker may be assessed using a non-affected portion of the prostate and this normal level of expression may be compared with the level of expression of the same marker in an affected portion of the prostate. Alternately, and particularly as further information becomes available as a result of routine performance of the methods described herein, population-average values for normal expression of the markers of the invention may be used. In other embodiments, the 'normal' level of expression of a marker may be determined by assessing expression of the marker in a patient sample obtained from a non-cancer-afflicted patient, from a patient sample obtained from a patient before the suspected onset of prostate cancer in the patient, from archived patient samples, and the like.

The invention includes compositions, kits, and methods for assessing the presence of prostate cancer cells in a sample (*e.g.* an archived tissue sample or a sample obtained from a patient). These compositions, kits, and methods are substantially the same as those described above, except that, where necessary, the compositions, kits, and methods are adapted for use with samples other than patient samples. For example, when the sample to be used is a paraffinized, archived human tissue sample, it can be necessary to adjust the ratio of compounds in the compositions of the invention, in the kits of the invention, or the methods used to assess levels of marker expression in the sample. Such methods are well known in the art and within the skill of the ordinary artisan.

The invention includes a kit for assessing the presence of prostate cancer cells (*e.g.* in a sample such as a patient sample). The kit comprises a plurality of reagents, each of which is capable of binding specifically with a nucleic acid or polypeptide corresponding to a marker of the invention. Suitable reagents for binding with a polypeptide corresponding to a marker of the invention include antibodies, antibody derivatives, antibody fragments, and the like. Suitable reagents for binding with a nucleic acid (*e.g.* a genomic DNA, an mRNA, a spliced mRNA, a cDNA, or the like) include complementary nucleic acids. For example, the nucleic acid reagents may include oligonucleotides (labeled or non-labeled) fixed to a substrate, labeled oligonucleotides not bound with a substrate, pairs of PCR primers, molecular beacon probes, and the like.

The kit of the invention may optionally comprise additional components useful for performing the methods of the invention. By way of example, the kit may comprise fluids (*e.g.* SSC buffer) suitable for annealing complementary nucleic acids or for binding an antibody with a protein with which it specifically binds, one or more sample compartments, an instructional material which describes performance of a method of the invention, a sample of normal prostate cells, a sample of prostate cancer cells, and the like.

The invention also includes a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with prostate cancer. In this method, a protein or protein fragment corresponding to a marker of the invention is isolated (*e.g.* by purification from a cell in which it is expressed or by transcription and translation of a nucleic acid encoding the protein *in vivo* or *in vitro* using known methods). A vertebrate, preferably a

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mammal such as a mouse, rat, rabbit, or sheep, is immunized using the isolated protein or protein fragment. The vertebrate may optionally (and preferably) be immunized at least one additional time with the isolated protein or protein fragment, so that the vertebrate exhibits a robust immune response to the protein or protein fragment. Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods well known in the art. Hybridomas formed in this manner are then screened using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein or protein fragment. The invention also includes hybridomas made by this method and antibodies made using such hybridomas.

The invention also includes a method of assessing the efficacy of a test compound for inhibiting prostate cancer cells. As described above, differences in the level of expression of the markers of the invention correlate with the cancerous state of prostate cells. Although it is recognized that changes in the levels of expression of certain of the markers of the invention likely result from the cancerous state of prostate cells, it is likewise recognized that changes in the levels of expression of other of the markers of the invention induce, maintain, and promote the cancerous state of those cells. Thus, compounds which inhibit prostate cancer in a patient will cause the level of expression of one or more of the markers of the invention to change to a level nearer the normal level of expression for that marker (*i.e.* the level of expression for the marker in non-cancerous prostate cells).

This method thus comprises comparing expression of a marker in a first prostate cell sample and maintained in the presence of the test compound and expression of the marker in a second prostate cell sample and maintained in the absence of the test compound. A significant altered level of expression of a marker listed within Tables 1-1 to 6 is an indication that the test compound inhibits prostate cancer. The prostate cell samples may, for example, be aliquots of a single sample of normal prostate cells obtained from a patient, pooled samples of normal prostate cells obtained from a patient, cells of a normal prostate cell line, aliquots of a single sample of prostate cancer cells obtained from a patient, pooled samples of prostate cancer cells obtained from a patient, cells of a prostate cancer cell line, or the like. In one embodiment, the samples are prostate cancer cells obtained from a patient and a plurality of compounds known to be effective for

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inhibiting various prostate cancers are tested in order to identify the compound which is likely to best inhibit the prostate cancer in the patient.

This method may likewise be used to assess the efficacy of a therapy for inhibiting prostate cancer in a patient. In this method, the level of expression of one or more markers of the invention in a pair of samples (one subjected to the therapy, the other not subjected to the therapy) is assessed. As with the method of assessing the efficacy of test compounds, if the therapy induces a significant alteration in the level of expression of a marker listed within Tables 1-1 to 6 then the therapy is efficacious for inhibiting prostate cancer. As above, if samples from a selected patient are used in this method, then alternative therapies can be assessed *in vitro* in order to select a therapy most likely to be efficacious for inhibiting prostate cancer in the patient.

As described herein, prostate cancer in patients is associated with an altered level of expression of one or more markers listed within Tables 1-1 to 6. While, as discussed above, some of these changes in expression level result from occurrence of the prostate cancer, others of these changes induce, maintain, and promote the cancerous state of prostate cancer cells. Thus, prostate cancer characterized by an altered the level of expression of one or more markers listed within Tables 1-1 to 6 can be controlled or suppressed by altering expression of those markers.

Expression of a marker listed within Tables 1-1 to 6 can be inhibited in a number of ways generally known in the art. For example, an antisense oligonucleotide can be provided to the prostate cancer cells in order to inhibit transcription, translation, or both, of the marker(s). Alternately, a polynucleotide encoding an antibody, an antibody derivative, or an antibody fragment, and operably linked with an appropriate promoter/regulator region, can be provided to the cell in order to generate intracellular antibodies which will inhibit the function or activity of the protein corresponding to the marker(s). Using the methods described herein, a variety of molecules, particularly including molecules sufficiently small that they are able to cross the cell membrane, can be screened in order to identify molecules which inhibit expression of the marker(s). The compound so identified can be provided to the patient in order to inhibit expression of the marker(s) in the prostate cancer cells of the patient.

Expression of a marker listed in within Tables 1-1 to 6 can be enhanced in a number of ways generally known in the art. For example, a polynucleotide encoding the marker and

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operably linked with an appropriate promoter/regulator region can be provided to prostate cancer cells of the patient in order to induce enhanced expression of the protein (and mRNA) corresponding to the marker therein. Alternatively, if the protein is capable of crossing the cell membrane, inserting itself in the cell membrane, or is normally a secreted protein, then expression of the protein can be enhanced by providing the protein (*e.g.* directly or by way of the bloodstream or another prostate-associated fluid) to prostate cancer cells in the patient.

As described above, the cancerous state of human prostate cells is correlated with changes in the levels of expression of the markers of the invention. Thus, compounds which alter expression of one or more of the markers listed in within Tables 1-1 to 6 can induce prostate cell carcinogenesis. The invention thus includes a method for assessing the human prostate cell carcinogenic potential of a test compound. This method comprises maintaining separate aliquots of human prostate cells in the presence and absence of the test compound. Expression of a marker of the invention in each of the aliquots is compared. A significant alteration in the level of expression of a marker listed within Tables 1-1 to 6 in the aliquot maintained in the presence of the test compound (relative to the aliquot maintained in the absence of the test compound) is an indication that the test compound possesses human prostate cell carcinogenic potential. The relative carcinogenic potentials of various test compounds can be assessed by comparing the degree of enhancement or inhibition of the level of expression of the relevant markers, by comparing the number of markers for which the level of expression is enhanced or inhibited, or by comparing both.

Various aspects of the invention are described in further detail in the following subsections.

#### I. Isolated Nucleic Acid Molecules

One aspect of the invention pertains to isolated nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention or a portion of such a polypeptide. Isolated nucleic acids of the invention also include nucleic acid molecules sufficient for use as hybridization probes to identify nucleic acid molecules that correspond to a marker of the invention, including nucleic

acids which encode a polypeptide corresponding to a marker of the invention, and fragments of such nucleic acid molecules, *e.g.*, those suitable for use as PCR primers for the amplification or mutation of nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (*e.g.*, cDNA or genomic DNA) and RNA molecules (*e.g.*, mRNA) and  
5 analogs of the DNA or RNA generated using nucleotide analogs. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is double-stranded DNA.

An "isolated" nucleic acid molecule is one which is separated from other nucleic acid molecules which are present in the natural source of the nucleic acid molecule. Preferably, an "isolated" nucleic acid molecule is free of sequences (preferably protein-encoding sequences) which  
10 naturally flank the nucleic acid (*i.e.*, sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA of the organism from which the nucleic acid is derived. For example, in various embodiments, the isolated nucleic acid molecule can contain less than about 5 kB, 4 kB, 3 kB, 2 kB, 1 kB, 0.5 kB or 0.1 kB of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA of the cell from which the nucleic acid is derived. Moreover, an "isolated" nucleic  
15 acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or substantially free of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention, *e.g.*, a nucleic acid encoding a protein corresponding to a marker listed in one or more of Tables 1-1 to 6, can be isolated using  
20 standard molecular biology techniques and the sequence information in the database records described herein. Using all or a portion of such nucleic acid sequences, nucleic acid molecules of the invention can be isolated using standard hybridization and cloning techniques (*e.g.*, as described in Sambrook *et al.*, ed., *Molecular Cloning: A Laboratory Manual, 2nd ed.*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

A process for identifying a larger fragment or the full-length coding sequence of a marker of the present invention is thus also provided. Any conventional recombinant DNA techniques applicable for isolating polynucleotides may be employed. One such method involves the 5'-RACE-PCR technique, in which the poly-A mRNA that contains the coding sequence of particular interest is first reverse transcribed with a 3'-primer comprising a sequence disclosed  
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herein. The newly synthesized cDNA strand is then tagged with an anchor primer with a known sequence, which preferably contains a convenient cloning restriction site attached at the 5' end. The tagged cDNA is then amplified with the 3'-primer (or a nested primer sharing sequence homology to the internal sequences of the coding region) and the 5'-anchor primer. The amplification may be conducted under conditions of various levels of stringency to optimize the amplification specificity. 5'-RACE-PCR can be readily performed using commercial kits (available from, e.g., BRL Life Technologies Inc., Clontech) according to the manufacturer's instructions.

Isolating the complete coding sequence of a gene can also be carried out in a hybridization assay using a suitable probe. The probe preferably comprises at least 10 nucleotides, and more preferably exhibits sequence homology to the polynucleotides of the markers of the present invention. Other high throughput screens for cDNAs, such as those involving gene chip technology, can also be employed in obtaining the complete cDNA sequence.

In addition, databases exist that reduce the complexity of ESTs by assembling contiguous EST sequences into tentative genes. For example, TIGR has assembled human ESTs into a database called THC for tentative human consensus sequences. The THC database allows for a more definitive assignment compared to ESTs alone. Software programs exist (TIGR assembler and TIGEM EST assembly machine and contig assembly program (see Huang, X., 1996, *Genomes* 33:21-23)) that allow for assembling ESTs into contiguous sequences from any organism.

Alternatively, mRNA from a sample preparation is used to construct cDNA library in the ZAP Express vector following the procedure described in Velculescu *et al.*, 1997, *Science* 270:484. The ZAP Express cDNA synthesis kit (Stratagene) is used accordingly to the manufacturer's protocol. Plates containing 250 to 2000 plaques are hybridized as described in Rupert *et al.*, 1988, *Mol. Cell. Bio.* 8:3104 to oligonucleotide probes with the same conditions previously described for standard probes except that the hybridization temperature is reduced to a room temperature. Washes are performed in 6X standard-saline-citrate 0.1% SDS for 30 minutes at room temperature. The probes are labeled with <sup>32</sup>P-ATP through use of T4 polynucleotide kinase.

A partial cDNA (3' fragment) can be isolated by 3' directed PCR reaction. This procedure is a modification of the protocol described in Polyak *et al.*, 1997, *Nature* 389:300. Briefly, the procedure uses SAGE tags in PCR reaction such that the resultant PCR product contains

the SAGE tag of interest as well as additional cDNA, the length of which is defined by the position of the tag with respect to the 3' end of the cDNA. The cDNA product derived from such a transcript driven PCR reaction can be used for many applications.

RNA from a source to express the cDNA corresponding to a given tag is first  
5 converted to double-stranded cDNA using any standard cDNA protocol. Similar conditions used to generate cDNA for SAGE library construction can be employed except that a modified oligo-dT primer is used to derive the first strand synthesis. For example, the oligonucleotide of composition 5'-B-TCC GGC GCG CCG TTT TCC CAG TCA CGA(30)-3', contains a poly-T stretch at the 3' end for hybridization and priming from poly-A tails, an M13 priming site for use in subsequent  
10 PCR steps, a 5' Biotin label (B) for capture to streptavidin-coated magnetic beads, and an AscI restriction endonuclease site for releasing the cDNA from the streptavidin-coated magnetic beads. Theoretically, any sufficiently-sized DNA region capable of hybridizing to a PCR primer can be used as well as any other 8 base pair recognizing endonuclease.

cDNA constructed utilizing this or similar modified oligo-dT primer is then  
15 processed as described in U.S. Patent No. 5,695,937 up until adapter ligation where only one adapter is ligated to the cDNA pool. After adapter ligation, the cDNA is released from the streptavidin-coated magnetic beads and is then used as a template for cDNA amplification.

Various PCR protocols can be employed using PCR priming sites within the 3' modified oligo-dT primer and the SAGE tag. The SAGE tag-derived PCR primer employed can be  
20 of varying length dictated by 5' extension of the tag into the adaptor sequence. cDNA products are now available for a variety of applications.

This technique can be further modified by: (1) altering the length and/or content of the modified oligo-dT primer; (2) ligating adaptors other than that previously employed within the SAGE protocol; (3) performing PCR from template retained on the streptavidin-coated magnetic  
25 beads; and (4) priming first strand cDNA synthesis with non-oligo-dT based primers.

Gene trapper technology can also be used. The reagents and manufacturer's instructions for this technology are commercially available from Life Technologies, Inc., Gaithersburg, Maryland. Briefly, a complex population of single-stranded phagemid DNA containing directional cDNA inserts is enriched for the target sequence by hybridization in solution to a

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biotinylated oligonucleotide probe complementary to the target sequence. The hybrids are captured on streptavidin-coated paramagnetic beads. A magnet retrieves the paramagnetic beads from the solution, leaving nonhybridized single-stranded DNAs behind. Subsequently, the captured single-stranded DNA target is released from the biotinylated oligonucleotide. After release, the cDNA clone is further enriched by using a nonbiotinylated target oligonucleotide to specifically prime conversion of the single-stranded DNA. Following transformation and plating, typically 20% to 100% of the colonies represent the cDNA clone of interest. To identify the desired cDNA clone, the colonies may be screened by colony hybridization using the <sup>32</sup>P-labeled oligonucleotide, or alternatively by DNA sequencing and alignment of all sequences obtained from numerous clones to determine a consensus sequence.

A nucleic acid molecule of the invention can be amplified using cDNA, mRNA, or genomic DNA as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to all or a portion of a nucleic acid molecule of the invention can be prepared by standard synthetic techniques, *e.g.*, using an automated DNA synthesizer.

In another preferred embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule which has a nucleotide sequence complementary to the nucleotide sequence of a nucleic acid corresponding to a marker of the invention or to the nucleotide sequence of a nucleic acid encoding a protein which corresponds to a marker of the invention. A nucleic acid molecule which is complementary to a given nucleotide sequence is one which is sufficiently complementary to the given nucleotide sequence that it can hybridize to the given nucleotide sequence thereby forming a stable duplex.

Moreover, a nucleic acid molecule of the invention can comprise only a portion of a nucleic acid sequence, wherein the full length nucleic acid sequence comprises a marker of the invention or which encodes a polypeptide corresponding to a marker of the invention. Such nucleic acids can be used, for example, as a probe or primer. The probe/primer typically is used as one or more substantially purified oligonucleotides. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 7, preferably about

15, more preferably about 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, or 400 or more consecutive nucleotides of a nucleic acid of the invention.

Probes based on the sequence of a nucleic acid molecule of the invention can be used to detect transcripts or genomic sequences corresponding to one or more markers of the invention.

5 The probe comprises a label group attached thereto, *e.g.*, a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as part of a diagnostic test kit for identifying cells or tissues which mis-express the protein, such as by measuring levels of a nucleic acid molecule encoding the protein in a sample of cells from a subject, *e.g.*, detecting mRNA levels or determining whether a gene encoding the protein has been mutated or deleted.

10 The invention further encompasses nucleic acid molecules that differ, due to degeneracy of the genetic code, from the nucleotide sequence of nucleic acids encoding a protein which corresponds to a marker of the invention, and thus encode the same protein.

In addition to the nucleotide sequences described in the GenBank and IMAGE Consortium database records described herein, and in Table \_\_, it will be appreciated by those skilled in the art that DNA sequence polymorphisms that lead to changes in the amino acid  
15 sequence can exist within a population (*e.g.*, the human population). Such genetic polymorphisms can exist among individuals within a population due to natural allelic variation. An allele is one of a group of genes which occur alternatively at a given genetic locus. In addition, it will be appreciated that DNA polymorphisms that affect RNA expression levels can also exist that may  
20 affect the overall expression level of that gene (*e.g.*, by affecting regulation or degradation).

As used herein, the phrase "allelic variant" refers to a nucleotide sequence which occurs at a given locus or to a polypeptide encoded by the nucleotide sequence.

As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a polypeptide corresponding to a marker of  
25 the invention. Such natural allelic variations can typically result in 1-5% variance in the nucleotide sequence of a given gene. Alternative alleles can be identified by sequencing the gene of interest in a number of different individuals. This can be readily carried out by using hybridization probes to identify the same genetic locus in a variety of individuals. Any and all such nucleotide variations

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and resulting amino acid polymorphisms or variations that are the result of natural allelic variation and that do not alter the functional activity are intended to be within the scope of the invention.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 7, 15, 20, 25, 30, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 550, 650, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3500, 4000, 4500, or more nucleotides in length and hybridizes under stringent conditions to a nucleic acid corresponding to a marker of the invention or to a nucleic acid encoding a protein corresponding to a marker of the invention. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 75% (80%, 85%, preferably 90%) identical to each other typically remain hybridized to each other. Such stringent conditions are known to those skilled in the art and can be found in sections 6.3.1-6.3.6 of *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989). A preferred, non-limiting example of stringent hybridization conditions for annealing two single-stranded DNA each of which is at least about 100 bases in length and/or for annealing a single-stranded DNA and a single-stranded RNA each of which is at least about 100 bases in length, are hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C. Further preferred hybridization conditions are taught in Lockhart, *et al.*, Nature Biotechnology, Volume 14, 1996 August:1675-1680; Breslauer, *et al.*, Proc. Natl. Acad. Sci. USA, Volume 83, 1986 June: 3746-3750; Van Ness, *et al.*, Nucleic Acids Research, Volume 19, No. 19, 1991 September: 5143-5151; McGraw, *et al.*, BioTechniques, Volume 8, No. 6 1990: 674-678; and Milner, *et al.*, Nature Biotechnology, Volume 15, 1997 June: 537-541, all expressly incorporated by reference.

In addition to naturally-occurring allelic variants of a nucleic acid molecule of the invention that can exist in the population, the skilled artisan will further appreciate that sequence changes can be introduced by mutation thereby leading to changes in the amino acid sequence of the encoded protein, without altering the biological activity of the protein encoded thereby. For example, one can make nucleotide substitutions leading to amino acid substitutions at "non-essential" amino acid residues. A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence without altering the biological activity, whereas an "essential" amino acid residue is required for biological activity. For example, amino acid residues that are not conserved or only semi-conserved among homologs of various species may be non-essential for

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activity and thus would be likely targets for alteration. Alternatively, amino acid residues that are conserved among the homologs of various species (*e.g.*, murine and human) may be essential for activity and thus would not be likely targets for alteration.

Accordingly, another aspect of the invention pertains to nucleic acid molecules encoding a polypeptide of the invention that contain changes in amino acid residues that are not essential for activity. Such polypeptides differ in amino acid sequence from the naturally-occurring proteins which correspond to the markers of the invention, yet retain biological activity. In one embodiment, such a protein has an amino acid sequence that is at least about 40% identical, 50%, 60%, 70%, 80%, 90%, 95%, or 98% identical to the amino acid sequence of one of the proteins which correspond to the markers of the invention.

An isolated nucleic acid molecule encoding a variant protein can be created by introducing one or more nucleotide substitutions, additions or deletions into the nucleotide sequence of nucleic acids of the invention, such that one or more amino acid residue substitutions, additions, or deletions are introduced into the encoded protein. Mutations can be introduced by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (*e.g.*, lysine, arginine, histidine), acidic side chains (*e.g.*, aspartic acid, glutamic acid), uncharged polar side chains (*e.g.*, glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), non-polar side chains (*e.g.*, alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan), beta-branched side chains (*e.g.*, threonine, valine, isoleucine) and aromatic side chains (*e.g.*, tyrosine, phenylalanine, tryptophan, histidine). Alternatively, mutations can be introduced randomly along all or part of the coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for biological activity to identify mutants that retain activity. Following mutagenesis, the encoded protein can be expressed recombinantly and the activity of the protein can be determined.

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5 The present invention encompasses antisense nucleic acid molecules, *i.e.*, molecules which are complementary to a sense nucleic acid of the invention, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule corresponding to a marker of the invention or complementary to an mRNA sequence corresponding to a marker of the invention. Accordingly, an antisense nucleic acid of the invention can hydrogen bond to (*i.e.* anneal with) a sense nucleic acid of the invention. The antisense nucleic acid can be complementary to an entire coding strand, or to only a portion thereof, *e.g.*, all or part of the protein coding region (or open reading frame). An antisense nucleic acid molecule can also be antisense to all or part of a non-coding region of the coding strand of a nucleotide sequence encoding a polypeptide of the invention. The non-coding regions ("5' and 3' untranslated regions") are the 5' and 3' sequences which flank the coding region and are not translated into amino acids.

10 An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50 or more nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine substituted nucleotides can be used. Examples of modified nucleotides which can be used to generate the antisense nucleic acid include 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxymethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-

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carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been sub-cloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a polypeptide corresponding to a selected marker of the invention to thereby inhibit expression of the marker, *e.g.*, by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule which binds to DNA duplexes, through specific interactions in the major groove of the double helix. Examples of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site or infusion of the antisense nucleic acid into a prostate-associated body fluid. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules to peptides or antibodies which bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of the antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

An antisense nucleic acid molecule of the invention can be an  $\alpha$ -anomeric nucleic acid molecule. An  $\alpha$ -anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual  $\alpha$ -units, the strands run parallel to each other (Gaultier *et al.*, 1987, *Nucleic Acids Res.* 15:6625-6641). The antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.*, 1987, *Nucleic Acids Res.* 15:6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.*, 1987, *FEBS Lett.* 215:327-330).

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The invention also encompasses ribozymes. Ribozymes are catalytic RNA molecules with ribonuclease activity which are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus, ribozymes (*e.g.*, hammerhead ribozymes as described in Haselhoff and Gerlach, 1988, *Nature* 334:585-591) can be used to catalytically cleave mRNA transcripts to thereby inhibit translation of the protein encoded by the mRNA. A ribozyme having specificity for a nucleic acid molecule encoding a polypeptide corresponding to a marker of the invention can be designed based upon the nucleotide sequence of a cDNA corresponding to the marker. For example, a derivative of a *Tetrahymena* L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved (see Cech *et al.* U.S. Patent No. 4,987,071; and Cech *et al.* U.S. Patent No. 5,116,742). Alternatively, an mRNA encoding a polypeptide of the invention can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules (see, *e.g.*, Bartel and Szostak, 1993, *Science* 261:1411-1418).

The invention also encompasses nucleic acid molecules which form triple helical structures. For example, expression of a polypeptide of the invention can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the gene encoding the polypeptide (*e.g.*, the promoter and/or enhancer) to form triple helical structures that prevent transcription of the gene in target cells. See generally Helene (1991) *Anticancer Drug Des.* 6(6):569-84; Helene (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14(12):807-15.

In various embodiments, the nucleic acid molecules of the invention can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the stability, hybridization, or solubility of the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.*, 1996, *Bioorganic & Medicinal Chemistry* 4(1): 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a pseudopeptide backbone and only the four natural nucleobases are retained. The neutral backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be

performed using standard solid phase peptide synthesis protocols as described in Hyrup *et al.* (1996), *supra*; Perry-O'Keefe *et al.* (1996) *Proc. Natl. Acad. Sci. USA* 93:14670-675.

PNAs can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or antigene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs can also be used, *e.g.*, in the analysis of single base pair mutations in a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup (1996), *supra*; or as probes or primers for DNA sequence and hybridization (Hyrup, 1996, *supra*; Perry-O'Keefe *et al.*, 1996, *Proc. Natl. Acad. Sci. USA* 93:14670-675).

In another embodiment, PNAs can be modified, *e.g.*, to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated which can combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNASE H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the nucleobases, and orientation (Hyrup, 1996, *supra*). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996), *supra*, and Finn *et al.* (1996) *Nucleic Acids Res.* 24(17):3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry and modified nucleoside analogs. Compounds such as 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite can be used as a link between the PNA and the 5' end of DNA (Mag *et al.*, 1989, *Nucleic Acids Res.* 17:5973-88). PNA monomers are then coupled in a step-wise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.*, 1996, *Nucleic Acids Res.* 24(17):3357-63). Alternatively, chimeric molecules can be synthesized with a 5' DNA segment and a 3' PNA segment (Peterser *et al.*, 1975, *Bioorganic Med. Chem. Lett.* 5:1119-11124).

In other embodiments, the oligonucleotide can include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the

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cell membrane (see, *e.g.*, Letsinger *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:6553-6556; Lemaitre *et al.*, 1987, *Proc. Natl. Acad. Sci. USA* 84:648-652; PCT Publication No. WO 88/09810) or the blood-brain barrier (see, *e.g.*, PCT Publication No. WO 89/10134). In addition, oligonucleotides can be modified with hybridization-triggered cleavage agents (see, *e.g.*, Krol *et al.*, 1988, *Bio/Techniques* 6:958-976) or intercalating agents (see, *e.g.*, Zon, 1988, *Pharm. Res.* 5:539-549). To this end, the oligonucleotide can be conjugated to another molecule, *e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The invention also includes molecular beacon nucleic acids having at least one region which is complementary to a nucleic acid of the invention, such that the molecular beacon is useful for quantitating the presence of the nucleic acid of the invention in a sample. A "molecular beacon" nucleic acid is a nucleic acid comprising a pair of complementary regions and having a fluorophore and a fluorescent quencher associated therewith. The fluorophore and quencher are associated with different portions of the nucleic acid in such an orientation that when the complementary regions are annealed with one another, fluorescence of the fluorophore is quenched by the quencher. When the complementary regions of the nucleic acid are not annealed with one another, fluorescence of the fluorophore is quenched to a lesser degree. Molecular beacon nucleic acids are described, for example, in U.S. Patent 5,876,930.

## II. Isolated Proteins and Antibodies

One aspect of the invention pertains to isolated proteins which correspond to individual markers of the invention, and biologically active portions thereof, as well as polypeptide fragments suitable for use as immunogens to raise antibodies directed against a polypeptide corresponding to a marker of the invention. In one embodiment, the native polypeptide corresponding to a marker can be isolated from cells or tissue sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, polypeptides corresponding to a marker of the invention are produced by recombinant DNA techniques. Alternative to recombinant expression, a polypeptide corresponding to a marker of the invention can be synthesized chemically using standard peptide synthesis techniques.

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An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the protein is derived, or substantially free of chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of protein in which the protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. Thus, protein that is substantially free of cellular material includes preparations of protein having less than about 30%, 20%, 10%, or 5% (by dry weight) of heterologous protein (also referred to herein as a "contaminating protein"). When the protein or biologically active portion thereof is recombinantly produced, it is also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, 10%, or 5% of the volume of the protein preparation. When the protein is produced by chemical synthesis, it is preferably substantially free of chemical precursors or other chemicals, *i.e.*, it is separated from chemical precursors or other chemicals which are involved in the synthesis of the protein. Accordingly such preparations of the protein have less than about 30%, 20%, 10%, 5% (by dry weight) of chemical precursors or compounds other than the polypeptide of interest.

Biologically active portions of a polypeptide corresponding to a marker of the invention include polypeptides comprising amino acid sequences sufficiently identical to or derived from the amino acid sequence of the protein corresponding to the marker (*e.g.*, the amino acid sequence listed in the GenBank and IMAGE Consortium database records described herein), which include fewer amino acids than the full length protein, and exhibit at least one activity of the corresponding full-length protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the corresponding protein. A biologically active portion of a protein of the invention can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length. Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of the native form of a polypeptide of the invention.

Preferred polypeptides have the amino acid sequence listed in the one of the GenBank and IMAGE Consortium database records described herein. Other useful proteins are substantially identical (*e.g.*, at least about 40%, preferably 50%, 60%, 70%, 80%, 90%, 95%, or

99%) to one of these sequences and retain the functional activity of the protein of the corresponding naturally-occurring protein yet differ in amino acid sequence due to natural allelic variation or mutagenesis.

To determine the percent identity of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (*e.g.*, gaps can be introduced in the sequence of a first amino acid or nucleic acid sequence for optimal alignment with a second amino or nucleic acid sequence). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (*i.e.*, % identity = # of identical positions/total # of positions (*e.g.*, overlapping positions) x100). In one embodiment the two sequences are the same length.

The determination of percent identity between two sequences can be accomplished using a mathematical algorithm. A preferred, non-limiting example of a mathematical algorithm utilized for the comparison of two sequences is the algorithm of Karlin and Altschul (1990) *Proc. Natl. Acad. Sci. USA* 87:2264-2268, modified as in Karlin and Altschul (1993) *Proc. Natl. Acad. Sci. USA* 90:5873-5877. Such an algorithm is incorporated into the NBLAST and XBLAST programs of Altschul, *et al.* (1990) *J. Mol. Biol.* 215:403-410. BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to a nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to a protein molecules of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul *et al.* (1997) *Nucleic Acids Res.* 25:3389-3402. Alternatively, PSI-Blast can be used to perform an iterated search which detects distant relationships between molecules. When utilizing BLAST, Gapped BLAST, and PSI-Blast programs, the default parameters of the respective programs (*e.g.*, XBLAST and NBLAST) can be used. See <http://www.ncbi.nlm.nih.gov>. Another preferred, non-limiting example of a mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and

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Miller, (1988) *CABIOS* 4:11-17. Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Yet another useful algorithm for  
5 identifying regions of local sequence similarity and alignment is the FASTA algorithm as described in Pearson and Lipman (1988) *Proc. Natl. Acad. Sci. USA* 85:2444-2448. When using the FASTA algorithm for comparing nucleotide or amino acid sequences, a PAM120 weight residue table can, for example, be used with a  $k$ -tuple value of 2.

The percent identity between two sequences can be determined using techniques  
10 similar to those described above, with or without allowing gaps. In calculating percent identity, only exact matches are counted.

The invention also provides chimeric or fusion proteins corresponding to a marker of the invention. As used herein, a "chimeric protein" or "fusion protein" comprises all or part (preferably a biologically active part) of a polypeptide corresponding to a marker of the invention  
15 operably linked to a heterologous polypeptide (*i.e.*, a polypeptide other than the polypeptide corresponding to the marker). Within the fusion protein, the term "operably linked" is intended to indicate that the polypeptide of the invention and the heterologous polypeptide are fused in-frame to each other. The heterologous polypeptide can be fused to the amino-terminus or the carboxyl-terminus of the polypeptide of the invention.

20 One useful fusion protein is a GST fusion protein in which a polypeptide corresponding to a marker of the invention is fused to the carboxyl terminus of GST sequences. Such fusion proteins can facilitate the purification of a recombinant polypeptide of the invention.

In another embodiment, the fusion protein contains a heterologous signal sequence at its amino terminus. For example, the native signal sequence of a polypeptide corresponding to a  
25 marker of the invention can be removed and replaced with a signal sequence from another protein. For example, the gp67 secretory sequence of the baculovirus envelope protein can be used as a heterologous signal sequence (Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, NY, 1992). Other examples of eukaryotic heterologous signal sequences include the secretory sequences of melittin and human placental alkaline phosphatase (Stratagene; La Jolla,

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California). In yet another example, useful prokaryotic heterologous signal sequences include the phoA secretory signal (Sambrook *et al.*, *supra*) and the protein A secretory signal (Pharmacia Biotech; Piscataway, New Jersey).

In yet another embodiment, the fusion protein is an immunoglobulin fusion protein  
5 in which all or part of a polypeptide corresponding to a marker of the invention is fused to sequences derived from a member of the immunoglobulin protein family. The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand (soluble or membrane-bound) and a protein on the surface of a cell (receptor), to thereby suppress signal transduction *in vivo*. The  
10 immunoglobulin fusion protein can be used to affect the bioavailability of a cognate ligand of a polypeptide of the invention. Inhibition of ligand/receptor interaction can be useful therapeutically, both for treating proliferative and differentiative disorders and for modulating (*e.g.* promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies directed against a polypeptide of the invention in a  
15 subject, to purify ligands and in screening assays to identify molecules which inhibit the interaction of receptors with ligands.

Chimeric and fusion proteins of the invention can be produced by standard recombinant DNA techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification  
20 of gene fragments can be carried out using anchor primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence (see, *e.g.*, Ausubel *et al.*, *supra*). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST polypeptide). A nucleic acid encoding a polypeptide of the invention can be cloned into such an  
25 expression vector such that the fusion moiety is linked in-frame to the polypeptide of the invention.

A signal sequence can be used to facilitate secretion and isolation of the secreted protein or other proteins of interest. Signal sequences are typically characterized by a core of hydrophobic amino acids which are generally cleaved from the mature protein during secretion in one or more cleavage events. Such signal peptides contain processing sites that allow cleavage of

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the signal sequence from the mature proteins as they pass through the secretory pathway. Thus, the invention pertains to the described polypeptides having a signal sequence, as well as to polypeptides from which the signal sequence has been proteolytically cleaved (*i.e.*, the cleavage products). In one embodiment, a nucleic acid sequence encoding a signal sequence can be operably linked in an expression vector to a protein of interest, such as a protein which is ordinarily not secreted or is otherwise difficult to isolate. The signal sequence directs secretion of the protein, such as from a eukaryotic host into which the expression vector is transformed, and the signal sequence is subsequently or concurrently cleaved. The protein can then be readily purified from the extracellular medium by art recognized methods. Alternatively, the signal sequence can be linked to the protein of interest using a sequence which facilitates purification, such as with a GST domain.

The present invention also pertains to variants of the polypeptides corresponding to individual markers of the invention. Such variants have an altered amino acid sequence which can function as either agonists (mimetics) or as antagonists. Variants can be generated by mutagenesis, *e.g.*, discrete point mutation or truncation. An agonist can retain substantially the same, or a subset, of the biological activities of the naturally occurring form of the protein. An antagonist of a protein can inhibit one or more of the activities of the naturally occurring form of the protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the protein of interest. Thus, specific biological effects can be elicited by treatment with a variant of limited function. Treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein can have fewer side effects in a subject relative to treatment with the naturally occurring form of the protein.

Variants of a protein of the invention which function as either agonists (mimetics) or as antagonists can be identified by screening combinatorial libraries of mutants, *e.g.*, truncation mutants, of the protein of the invention for agonist or antagonist activity. In one embodiment, a variegated library of variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential protein sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (*e.g.*, for phage display). There are a variety of

methods which can be used to produce libraries of potential variants of the polypeptides of the invention from a degenerate oligonucleotide sequence. Methods for synthesizing degenerate oligonucleotides are known in the art (see, e.g., Narang, 1983, *Tetrahedron* 39:3; Itakura *et al.*, 1984, *Annu. Rev. Biochem.* 53:323; Itakura *et al.*, 1984, *Science* 198:1056; Ike *et al.*, 1983 *Nucleic Acid Res.* 11:477).

In addition, libraries of fragments of the coding sequence of a polypeptide corresponding to a marker of the invention can be used to generate a variegated population of polypeptides for screening and subsequent selection of variants. For example, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of the coding sequence of interest with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double stranded DNA, renaturing the DNA to form double stranded DNA which can include sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be derived which encodes amino terminal and internal fragments of various sizes of the protein of interest.

Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. The most widely used techniques, which are amenable to high throughput analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors, transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a technique which enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify variants of a protein of the invention (Arkin and Yourvan, 1992, *Proc. Natl. Acad. Sci. USA* 89:7811-7815; Delgrave *et al.*, 1993, *Protein Engineering* 6(3):327- 331).

An isolated polypeptide corresponding to a marker of the invention, or a fragment thereof, can be used as an immunogen to generate antibodies using standard techniques for polyclonal and monoclonal antibody preparation. The full-length polypeptide or protein can be

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used or, alternatively, the invention provides antigenic peptide fragments for use as immunogens. The antigenic peptide of a protein of the invention comprises at least 8 (preferably 10, 15, 20, or 30 or more) amino acid residues of the amino acid sequence of one of the polypeptides of the invention, and encompasses an epitope of the protein such that an antibody raised against the peptide forms a specific immune complex with a marker of the invention to which the protein corresponds. Preferred epitopes encompassed by the antigenic peptide are regions that are located on the surface of the protein, *e.g.*, hydrophilic regions. Hydrophobicity sequence analysis, hydrophilicity sequence analysis, or similar analyses can be used to identify hydrophilic regions.

An immunogen typically is used to prepare antibodies by immunizing a suitable (*i.e.* immunocompetent) subject such as a rabbit, goat, mouse, or other mammal or vertebrate. An appropriate immunogenic preparation can contain, for example, recombinantly-expressed or chemically-synthesized polypeptide. The preparation can further include an adjuvant, such as Freund's complete or incomplete adjuvant, or a similar immunostimulatory agent.

Accordingly, another aspect of the invention pertains to antibodies directed against a polypeptide of the invention. The terms "antibody" and "antibody substance" as used interchangeably herein refer to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site which specifically binds an antigen, such as a polypeptide of the invention, *e.g.*, an epitope of a polypeptide of the invention. A molecule which specifically binds to a given polypeptide of the invention is a molecule which binds the polypeptide, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and F(ab')<sub>2</sub> fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides polyclonal and monoclonal antibodies. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope.

Polyclonal antibodies can be prepared as described above by immunizing a suitable subject with a polypeptide of the invention as an immunogen. Preferred polyclonal antibody compositions are ones that have been selected for antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred polyclonal antibody preparations are ones that contain only antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred immunogen compositions are those that contain no other human proteins such as, for example, immunogen compositions made using a non-human host cell for recombinant expression

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of a polypeptide of the invention. In such a manner, the only human epitope or epitopes recognized by the resulting antibody compositions raised against this immunogen will be present as part of a polypeptide or polypeptides of the invention.

The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules can be harvested or isolated from the subject (*e.g.*, from the blood or serum of the subject) and further purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. Alternatively, antibodies specific for a protein or polypeptide of the invention can be selected or (*e.g.*, partially purified) or purified by, *e.g.*, affinity chromatography. For example, a recombinantly expressed and purified (or partially purified) protein of the invention is produced as described herein, and covalently or non-covalently coupled to a solid support such as, for example, a chromatography column. The column can then be used to affinity purify antibodies specific for the proteins of the invention from a sample containing antibodies directed against a large number of different epitopes, thereby generating a substantially purified antibody composition, *i.e.*, one that is substantially free of contaminating antibodies. By a substantially purified antibody composition is meant, in this context, that the antibody sample contains at most only 30% (by dry weight) of contaminating antibodies directed against epitopes other than those of the desired protein or polypeptide of the invention, and preferably at most 20%, yet more preferably at most 10%, and most preferably at most 5% (by dry weight) of the sample is contaminating antibodies. A purified antibody composition means that at least 99% of the antibodies in the composition are directed against the desired protein or polypeptide of the invention.

At an appropriate time after immunization, *e.g.*, when the specific antibody titers are highest, antibody-producing cells can be obtained from the subject and used to prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) *Nature* 256:495-497, the human B cell hybridoma technique (see Kozbor *et al.*, 1983, *Immunol. Today* 4:72), the EBV-hybridoma technique (see Cole *et al.*, pp. 77-96 In *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc., 1985) or trioma techniques. The technology for producing hybridomas is well known (see generally *Current Protocols in Immunology*, Coligan *et al.* ed., John Wiley & Sons, New York, 1994). Hybridoma cells producing a monoclonal antibody of the invention are detected by screening the hybridoma culture supernatants for antibodies that bind the polypeptide of interest, *e.g.*, using a standard ELISA assay.

Alternative to preparing monoclonal antibody-secreting hybridomas, a monoclonal antibody directed against a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (e.g., an antibody phage display library) with the polypeptide of interest. Kits for generating and screening phage display libraries are

5 commercially available (e.g., the Pharmacia *Recombinant Phage Antibody System*, Catalog No. 27-9400-01; and the Stratagene *SurfZAP Phage Display Kit*, Catalog No. 240612). Additionally, examples of methods and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT

10 Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs *et al.* (1991) *Bio/Technology* 9:1370-1372; Hay *et al.* (1992) *Hum. Antibod. Hybridomas* 3:81-85; Huse *et al.* (1989) *Science* 246:1275-1281; Griffiths *et al.* (1993) *EMBO J.* 12:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized monoclonal

15 antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. A chimeric antibody is a molecule in which different portions are derived from different animal species, such as those having a variable region derived from a murine mAb and a human immunoglobulin constant region. (See, e.g., Cabilly *et al.*, U.S. Patent No. 4,816,567; and Boss *et al.*, U.S. Patent No. 4,816,397, which are

20 incorporated herein by reference in their entirety.) Humanized antibodies are antibody molecules from non-human species having one or more complementarily determining regions (CDRs) from the non-human species and a framework region from a human immunoglobulin molecule. (See, e.g., Queen, U.S. Patent No. 5,585,089, which is incorporated herein by reference in its entirety.) Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA

25 techniques known in the art, for example using methods described in PCT Publication No. WO 87/02671; European Patent Application 184,187; European Patent Application 171,496; European Patent Application 173,494; PCT Publication No. WO 86/01533; U.S. Patent No. 4,816,567; European Patent Application 125,023; Better *et al.* (1988) *Science* 240:1041-1043; Liu *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:3439-3443; Liu *et al.* (1987) *J. Immunol.* 139:3521-3526; Sun *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:214-218; Nishimura *et al.* (1987) *Cancer Res.* 47:999-1005; Wood *et al.* (1985) *Nature* 314:446-449; and Shaw *et al.* (1988) *J. Natl. Cancer Inst.* 80:1553-1559; Morrison (1985) *Science* 229:1202-1207; Oi *et al.* (1986) *Bio/Techniques* 4:214; U.S. Patent

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5,225,539; Jones *et al.* (1986) *Nature* 321:552-525; Verhoeyan *et al.* (1988) *Science* 239:1534; and Beidler *et al.* (1988) *J. Immunol.* 141:4053-4060.

Antibodies of the invention may be used as therapeutic agents in treating cancers. In a preferred embodiment, completely human antibodies of the invention are used for therapeutic treatment of human cancer patients, particularly those having an ovarian cancer. Such antibodies can be produced, for example, using transgenic mice which are incapable of expressing endogenous immunoglobulin heavy and light chains genes, but which can express human heavy and light chain genes. The transgenic mice are immunized in the normal fashion with a selected antigen, *e.g.*, all or a portion of a polypeptide corresponding to a marker of the invention. Monoclonal antibodies directed against the antigen can be obtained using conventional hybridoma technology. The human immunoglobulin transgenes harbored by the transgenic mice rearrange during B cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically useful IgG, IgA and IgE antibodies. For an overview of this technology for producing human antibodies, see Lonberg and Huszar (1995) *Int. Rev. Immunol.* 13:65-93). For a detailed discussion of this technology for producing human antibodies and human monoclonal antibodies and protocols for producing such antibodies, see, *e.g.*, U.S. Patent 5,625,126; U.S. Patent 5,633,425; U.S. Patent 5,569,825; U.S. Patent 5,661,016; and U.S. Patent 5,545,806. In addition, companies such as Abgenix, Inc. (Freemont, CA), can be engaged to provide human antibodies directed against a selected antigen using technology similar to that described above.

Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, *e.g.*, a murine antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers *et al.*, 1994, *Bio/technology* 12:899-903).

An antibody directed against a polypeptide corresponding to a marker of the invention (*e.g.*, a monoclonal antibody) can be used to isolate the polypeptide by standard techniques, such as affinity chromatography or immunoprecipitation. Moreover, such an antibody can be used to detect the marker (*e.g.*, in a cellular lysate or cell supernatant) in order to evaluate the level and pattern of expression of the marker. The antibodies can also be used diagnostically to monitor protein levels in tissues or body fluids as part of a clinical testing procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline

phosphatase,  $\beta$ -galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes  
5 luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{35}\text{S}$  or  $^3\text{H}$ .

Further, an antibody (or fragment thereof) can be conjugated to a therapeutic moiety such as a cytotoxin, a therapeutic agent or a radioactive metal ion. A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include taxol, cytochalasin B, gramicidin  
10 D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites (*e.g.*, methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine),  
15 alkylating agents (*e.g.*, mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclophosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (*e.g.*, daunorubicin (formerly daunomycin) and doxorubicin), antibiotics (*e.g.*, dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (*e.g.*, vincristine and vinblastine).

20 The conjugates of the invention can be used for modifying a given biological response, the drug moiety is not to be construed as limited to classical chemical therapeutic agents. For example, the drug moiety may be a protein or polypeptide possessing a desired biological activity. Such proteins may include, for example, a toxin such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor,  $\alpha$ -interferon,  $\beta$ -interferon, nerve  
25 growth factor, platelet derived growth factor, tissue plasminogen activator; or, biological response modifiers such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophage colony stimulating factor ("GM-CSF"), granulocyte colony stimulating factor ("G-CSF"), or other growth factors.

Techniques for conjugating such therapeutic moiety to antibodies are well known, see, *e.g.*,  
30 Arnon et al., "Monoclonal Antibodies For Immunotargeting Of Drugs In Cancer Therapy", in

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Monoclonal Antibodies And Cancer Therapy, Reisfeld et al. (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom et al., "Antibodies For Drug Delivery", in Controlled Drug Delivery (2nd Ed.), Robinson et al. (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987); Thorpe, "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in Monoclonal Antibodies '84: Biological And  
5 Clinical Applications, Pinchera et al. (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of Radiolabeled Antibody In Cancer Therapy", in Monoclonal Antibodies For Cancer Detection And Therapy, Baldwin et al. (eds.), pp. 303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", Immunol. Rev., 62:119-58 (1982).

10 Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980.

Accordingly, in one aspect, the invention provides substantially purified antibodies or fragments thereof, and non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group  
15 consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length  
20 penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. In various embodiments, the substantially purified antibodies of the invention, or fragments thereof, can be human, non-human, chimeric  
25 and/or humanized antibodies.

In another aspect, the invention provides non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of: the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid

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residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. Such non-human antibodies can be goat, mouse, sheep, horse, chicken, rabbit, or rat antibodies. Alternatively, the non-human antibodies of the invention can be chimeric and/or humanized antibodies. In addition, the non-human antibodies of the invention can be polyclonal antibodies or monoclonal antibodies.

In still a further aspect, the invention provides monoclonal antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to an amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. The monoclonal antibodies can be human, humanized, chimeric and/or non-human antibodies.

The substantially purified antibodies or fragments thereof may specifically bind to a signal peptide, a secreted sequence, an extracellular domain, a transmembrane or a cytoplasmic domain or cytoplasmic membrane of a polypeptide of the invention. In a particularly preferred embodiment, the substantially purified antibodies or fragments thereof, the non-human antibodies or fragments thereof, and/or the monoclonal antibodies or fragments thereof, of the invention specifically bind to a secreted sequence or an extracellular domain of the amino acid sequences of the present invention.

Any of the antibodies of the invention can be conjugated to a therapeutic moiety or to a detectable substance. Non-limiting examples of detectable substances that can be conjugated to the antibodies of the invention are an enzyme, a prosthetic group, a fluorescent material, a luminescent material, a bioluminescent material, and a radioactive material.

5           The invention also provides a kit containing an antibody of the invention conjugated to a detectable substance, and instructions for use. Still another aspect of the invention is a pharmaceutical composition comprising an antibody of the invention and a pharmaceutically acceptable carrier. In preferred embodiments, the pharmaceutical composition contains an antibody of the invention, a therapeutic moiety, and a pharmaceutically acceptable carrier.

10           Still another aspect of the invention is a method of making an antibody that specifically recognizes a polypeptide of the present invention, the method comprising immunizing a mammal with a polypeptide. The polypeptide used as an immungen comprises an amino acid sequence selected from the group consisting of the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the nucleic acid molecules of the present invention, a  
15           fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which  
20           hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C.

After immunization, a sample is collected from the mammal that contains an antibody that specifically recognizes the polypeptide. Preferably, the polypeptide is recombinantly produced  
25           using a non-human host cell. Optionally, the antibodies can be further purified from the sample using techniques well known to those of skill in the art. The method can further comprise producing a monoclonal antibody-producing cell from the cells of the mammal. Optionally, antibodies are collected from the antibody-producing cell.

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### III. Recombinant Expression Vectors and Host Cells

Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding a polypeptide corresponding to a marker of the invention (or a portion of such a polypeptide). As used herein, the term "vector" refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, namely expression vectors, are capable of directing the expression of genes to which they are operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids (vectors). However, the invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*, replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell. This means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (*e.g.*, polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, *Methods in Enzymology: Gene Expression Technology* vol.185, Academic Press, San Diego, CA (1991). Regulatory sequences include those which direct constitutive expression of a nucleotide

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sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (*e.g.*, tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the host cell to be transformed, the level of expression of protein desired, and the like. The expression vectors of the invention can be introduced into host cells to thereby produce proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as described herein.

The recombinant expression vectors of the invention can be designed for expression of a polypeptide corresponding to a marker of the invention in prokaryotic (*e.g.*, *E. coli*) or eukaryotic cells (*e.g.*, insect cells {using baculovirus expression vectors}, yeast cells or mammalian cells). Suitable host cells are discussed further in Goeddel, *supra*. Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7 polymerase.

Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion vectors typically serve three purposes: 1) to increase expression of recombinant protein; 2) to increase the solubility of the recombinant protein; and 3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson, 1988, *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein.

Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann *et al.*, 1988, *Gene* 69:301-315) and pET 11d (Studier *et al.*, p. 60-89, In *Gene Expression Technology: Methods in Enzymology* vol.185, Academic Press, San Diego, CA, 1991). Target

gene expression from the pTrc vector relies on host RNA polymerase transcription from a hybrid trp-lac fusion promoter. Target gene expression from the pET 11d vector relies on transcription from a T7 gn10-lac fusion promoter mediated by a co-expressed viral RNA polymerase (T7 gn1). This viral polymerase is supplied by host strains BL21(DE3) or HMS174(DE3) from a resident prophage harboring a T7 gn1 gene under the transcriptional control of the lacUV 5 promoter.

One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein (Gottesman, p. 119-128, In *Gene Expression Technology: Methods in Enzymology* vol. 185, Academic Press, San Diego, CA, 1990. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression vector so that the individual codons for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.*, 1992, *Nucleic Acids Res.* 20:2111-2118). Such alteration of nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the expression vector is a yeast expression vector. Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari *et al.*, 1987, *EMBO J.* 6:229-234), pMFa (Kurjan and Herskowitz, 1982, *Cell* 30:933-943), pJRY88 (Schultz *et al.*, 1987, *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, CA), and pPicZ (Invitrogen Corp, San Diego, CA).

Alternatively, the expression vector is a baculovirus expression vector. Baculovirus vectors available for expression of proteins in cultured insect cells (*e.g.*, Sf 9 cells) include the pAc series (Smith *et al.*, 1983, *Mol. Cell Biol.* 3:2156-2165) and the pVL series (Lucklow and Summers, 1989, *Virology* 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed, 1987, *Nature* 329:840) and pMT2NOPC (Kaufman *et al.*, 1987, *EMBO J.* 6:187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells see chapters 16 and 17 of Sambrook *et al.*, *supra*.

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In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (e.g., tissue-specific regulatory elements are used to express the nucleic acid). Tissue-specific regulatory elements are known in the art. Non-limiting examples of suitable tissue-specific promoters include the albumin promoter (liver-specific; Pinkert *et al.*, 1987, *Genes Dev.* 1:268-277), lymphoid-specific promoters (Calame and Eaton, 1988, *Adv. Immunol.* 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore, 1989, *EMBO J.* 8:729-733) and immunoglobulins (Banerji *et al.*, 1983, *Cell* 33:729-740; Queen and Baltimore, 1983, *Cell* 33:741-748), neuron-specific promoters (e.g., the neurofilament promoter; Byrne and Ruddle, 1989, *Proc. Natl. Acad. Sci. USA* 86:5473-5477), pancreas-specific promoters (Edlund *et al.*, 1985, *Science* 230:912-916), and mammary gland-specific promoters (e.g., milk whey promoter; U.S. Patent No. 4,873,316 and European Application Publication No. 264,166). Developmentally-regulated promoters are also encompassed, for example the murine hox promoters (Kessel and Gruss, 1990, *Science* 249:374-379) and the  $\alpha$ -fetoprotein promoter (Camper and Tilghman, 1989, *Genes Dev.* 3:537-546).

The invention further provides a recombinant expression vector comprising a DNA molecule of the invention cloned into the expression vector in an antisense orientation. That is, the DNA molecule is operably linked to a regulatory sequence in a manner which allows for expression (by transcription of the DNA molecule) of an RNA molecule which is antisense to the mRNA encoding a polypeptide of the invention. Regulatory sequences operably linked to a nucleic acid cloned in the antisense orientation can be chosen which direct the continuous expression of the antisense RNA molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen which direct constitutive, tissue-specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid, or attenuated virus in which antisense nucleic acids are produced under the control of a high efficiency regulatory region, the activity of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub *et al.*, 1986, *Trends in Genetics*, Vol. 1(1).

Another aspect of the invention pertains to host cells into which a recombinant expression vector of the invention has been introduced. The terms "host cell" and "recombinant

host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic (*e.g.*, *E. coli*) or eukaryotic cell (*e.g.*, insect cells, yeast or mammalian cells).

Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid into a host cell, including calcium phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.* (*supra*), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a selectable marker (*e.g.*, for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred selectable markers include those which confer resistance to drugs, such as G418, hygromycin and methotrexate. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (*e.g.*, cells that have incorporated the selectable marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce a polypeptide corresponding to a marker of the invention. Accordingly, the invention further provides methods for producing a polypeptide corresponding to a marker of the invention using the host cells of the invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium such that the marker is produced. In another

embodiment, the method further comprises isolating the marker polypeptide from the medium or the host cell.

5 The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a sequences encoding a polypeptide corresponding to a marker of the invention have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous sequences encoding a marker protein of the invention have been introduced into their genome or homologous recombinant animals in which endogenous gene(s) encoding a polypeptide corresponding to a marker of the invention sequences have been  
10 altered. Such animals are useful for studying the function and/or activity of the polypeptide corresponding to the marker and for identifying and/or evaluating modulators of polypeptide... activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows,  
15 goats, chickens, amphibians, etc. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, an "homologous recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous gene  
20 has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, *e.g.*, an embryonic cell of the animal, prior to development of the animal.

A transgenic animal of the invention can be created by introducing a nucleic acid encoding a polypeptide corresponding to a marker of the invention into the male pronuclei of a  
25 fertilized oocyte, *e.g.*, by microinjection, retroviral infection, and allowing the oocyte to develop in a pseudopregnant female foster animal. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency of expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the transgene to direct expression of the polypeptide of the invention to particular cells. Methods for generating transgenic animals via

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embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S. Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified based upon the presence of the transgene in its genome and/or expression of mRNA encoding the transgene in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying the transgene can further be bred to other transgenic animals carrying other transgenes.

To create an homologous recombinant animal, a vector is prepared which contains at least a portion of a gene encoding a polypeptide corresponding to a marker of the invention into which a deletion, addition or substitution has been introduced to thereby alter, *e.g.*, functionally disrupt, the gene. In a preferred embodiment, the vector is designed such that, upon homologous recombination, the endogenous gene is functionally disrupted (*i.e.*, no longer encodes a functional protein; also referred to as a "knock out" vector). Alternatively, the vector can be designed such that, upon homologous recombination, the endogenous gene is mutated or otherwise altered but still encodes functional protein (*e.g.*, the upstream regulatory region can be altered to thereby alter the expression of the endogenous protein). In the homologous recombination vector, the altered portion of the gene is flanked at its 5' and 3' ends by additional nucleic acid of the gene to allow for homologous recombination to occur between the exogenous gene carried by the vector and an endogenous gene in an embryonic stem cell. The additional flanking nucleic acid sequences are of sufficient length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector (see, *e.g.*, Thomas and Capecchi, 1987, *Cell* 51:503 for a description of homologous recombination vectors). The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced gene has homologously recombined with the endogenous gene are selected (see, *e.g.*, Li *et al.*, 1992, *Cell* 69:915). The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse) to form aggregation chimeras (see, *e.g.*, Bradley, *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, Robertson, Ed., IRL, Oxford, 1987, pp. 113-152). A

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chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology* 2:823-829 and in PCT Publication NOS. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169.

In another embodiment, transgenic non-human animals can be produced which contain selected systems which allow for regulated expression of the transgene. One example of such a system is the *cre/loxP* recombinase system of bacteriophage P1. For a description of the *cre/loxP* recombinase system, see, e.g., Lakso *et al.* (1992) *Proc. Natl. Acad. Sci. USA* 89:6232-6236. Another example of a recombinase system is the FLP recombinase system of *Saccharomyces cerevisiae* (O'Gorman *et al.*, 1991, *Science* 251:1351-1355). If a *cre/loxP* recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the *Cre* recombinase and a selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, e.g., by mating two transgenic animals, one containing a transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813 and PCT Publication NOS. WO 97/07668 and WO 97/07669.

#### IV. Pharmaceutical Compositions

The nucleic acid molecules, polypeptides, and antibodies (also referred to herein as "active compounds") corresponding to a marker of the invention can be incorporated into pharmaceutical compositions suitable for administration. Such compositions typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption

delaying agents, and the like, compatible with pharmaceutical administration. The use of such media and agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof in the compositions is contemplated. Supplementary active compounds can also be incorporated into the compositions.

The invention includes methods for preparing pharmaceutical compositions for modulating the expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such methods comprise formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such compositions can further include additional active agents. Thus, the invention further includes methods for preparing a pharmaceutical composition by formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention and one or more additional active compounds.

The invention also provides methods (also referred to herein as "screening assays") for identifying modulators, *i.e.*, candidate or test compounds or agents (*e.g.*, peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker, or (b) have a modulatory (*e.g.*, stimulatory or inhibitory) effect on the activity of the marker or, more specifically, (c) have a modulatory effect on the interactions of the marker with one or more of its natural substrates (*e.g.*, peptide, protein, hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker. Such assays typically comprise a reaction between the marker and one or more assay components. The other components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker.

The test compounds of the present invention may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone which are resistant to enzymatic degradation



but which nevertheless remain bioactive; see, *e.g.*, Zuckermann *et al.*, 1994, *J. Med. Chem.* 37:2678-85); spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, *Anticancer Drug Des.* 12:145).

Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt *et al.* (1993) *Proc. Natl. Acad. Sci. U.S.A.* 90:6909; Erb *et al.* (1994) *Proc. Natl. Acad. Sci. USA* 91:11422; Zuckermann *et al.* (1994). *J. Med. Chem.* 37:2678; Cho *et al.* (1993) *Science* 261:1303; Carrell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2059; Carell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2061; and in Gallop *et al.* (1994) *J. Med. Chem.* 37:1233.

Libraries of compounds may be presented in solution (*e.g.*, Houghten, 1992, *Biotechniques* 13:412-421), or on beads (Lam, 1991, *Nature* 354:82-84), chips (Fodor, 1993, *Nature* 364:555-556), bacteria and/or spores, (Ladner, USP 5,223,409), plasmids (Cull *et al.*, 1992, *Proc Natl Acad Sci USA* 89:1865-1869) or on phage (Scott and Smith, 1990, *Science* 249:386-390; Devlin, 1990, *Science* 249:404-406; Cwirla *et al.*, 1990, *Proc. Natl. Acad. Sci.* 87:6378-6382; Felici, 1991, *J. Mol. Biol.* 222:301-310; Ladner, *supra.*).

In one embodiment, the invention provides assays for screening candidate or test compounds which are substrates of a marker or biologically active portion thereof. In another embodiment, the invention provides assays for screening candidate or test compounds which bind to a marker or biologically active portion thereof. Determining the ability of the test compound to directly bind to a marker can be accomplished, for example, by coupling the compound with a radioisotope or enzymatic label such that binding of the compound to the marker can be determined by detecting the labeled marker compound in a complex. For example, compounds (*e.g.*, marker substrates) can be labeled with  $^{125}\text{I}$ ,  $^{35}\text{S}$ ,  $^{14}\text{C}$ , or  $^3\text{H}$ , either directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively, assay components can be enzymatically labeled with, for example, horseradish peroxidase, alkaline

phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product.

In another embodiment, the invention provides assays for screening candidate or test compounds which modulate the activity of a marker or a biologically active portion thereof. In all likelihood, the marker can, *in vivo*, interact with one or more molecules, such as but not limited to, peptides, proteins, hormones, cofactors and nucleic acids. For the purposes of this discussion, such cellular and extracellular molecules are referred to herein as "binding partners" or marker "substrate".

One necessary embodiment of the invention in order to facilitate such screening is the use of the marker to identify its natural *in vivo* binding partners. There are many ways to accomplish this which are known to one skilled in the art. One example is the use of the marker protein as "bait protein" in a two-hybrid assay or three-hybrid assay (see, *e.g.*, U.S. Patent No. 5,283,317; Zervos *et al*, 1993, *Cell* 72:223-232; Madura *et al*, 1993, *J. Biol. Chem.* 268:12046-12054; Bartel *et al*, 1993, *Biotechniques* 14:920-924; Iwabuchi *et al*, 1993 *Oncogene* 8:1693-1696; Brent WO94/10300) in order to identify other proteins which bind to or interact with the marker (binding partners) and, therefore, are possibly involved in the natural function of the marker. Such marker binding partners are also likely to be involved in the propagation of signals by the marker or downstream elements of a marker-mediated signaling pathway. Alternatively, such marker binding partners may also be found to be inhibitors of the marker.

The two-hybrid system is based on the modular nature of most transcription factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that encodes a marker protein fused to a gene encoding the DNA binding domain of a known transcription factor (*e.g.*, GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, *in vivo*, forming a marker-dependent complex, the DNA-binding and activation domains of the transcription factor are brought into close proximity. This proximity allows transcription of a reporter gene (*e.g.*, LacZ) which is operably linked to a transcriptional regulatory site responsive to the transcription factor.

Expression of the reporter gene can be readily detected and cell colonies containing the functional transcription factor can be isolated and used to obtain the cloned gene which encodes the protein which interacts with the marker protein.

In a further embodiment, assays may be devised through the use of the invention for the purpose of identifying compounds which modulate (*e.g.*, affect either positively or negatively) interactions between a marker and its substrates and/or binding partners. Such compounds can include, but are not limited to, molecules such as antibodies, peptides, hormones, oligonucleotides, nucleic acids, and analogs thereof. Such compounds may also be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. The preferred assay components for use in this embodiment is an prostate cancer marker identified herein, the known binding partner and/or substrate of same, and the test compound. Test compounds can be supplied from any source.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between the marker and its binding partner involves preparing a reaction mixture containing the marker and its binding partner under conditions and for a time sufficient to allow the two products to interact and bind, thus forming a complex. In order to test an agent for inhibitory activity, the reaction mixture is prepared in the presence and absence of the test compound. The test compound can be initially included in the reaction mixture, or can be added at a time subsequent to the addition of the marker and its binding partner. Control reaction mixtures are incubated without the test compound or with a placebo. The formation of any complexes between the marker and its binding partner is then detected. The formation of a complex in the control reaction, but less or no such formation in the reaction mixture containing the test compound, indicates that the compound interferes with the interaction of the marker and its binding partner. Conversely, the formation of more complex in the presence of compound than in the control reaction indicates that the compound may enhance interaction of the marker and its binding partner.

The assay for compounds that interfere with the interaction of the marker with its binding partner may be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring either the marker or its binding partner onto a solid phase and detecting complexes anchored to the solid phase at the end of the reaction. In homogeneous assays, the entire

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reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the markers and the binding partners (*e.g.*, by competition) can be identified by conducting the reaction in the presence of the test substance, *i.e.*, by adding the test substance to the reaction mixture prior to or simultaneously with the marker and its interactive binding partner. Alternatively, test compounds that disrupt preformed complexes, *e.g.*, compounds with higher binding constants that displace one of the components from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are briefly described below.

In a heterogeneous assay system, either the marker or its binding partner is anchored onto a solid surface or matrix, while the other corresponding non-anchored component may be labeled, either directly or indirectly. In practice, microtitre plates are often utilized for this approach. The anchored species can be immobilized by a number of methods, either non-covalent or covalent, that are typically well known to one who practices the art. Non-covalent attachment can often be accomplished simply by coating the solid surface with a solution of the marker or its binding partner and drying. Alternatively, an immobilized antibody specific for the assay component to be anchored can be used for this purpose. Such surfaces can often be prepared in advance and stored.

In related embodiments, a fusion protein can be provided which adds a domain that allows one or both of the assay components to be anchored to a matrix. For example, glutathione-S-transferase/marker fusion proteins or glutathione-S-transferase/binding partner can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, which are then combined with the test compound or the test compound and either the non-adsorbed marker or its binding partner, and the mixture incubated under conditions conducive to complex formation (*e.g.*, physiological conditions). Following incubation, the beads or microtiter plate wells are washed to remove any unbound assay components, the immobilized complex assessed either directly or indirectly, for example, as described above. Alternatively, the complexes can be dissociated from the matrix, and the level of marker binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either a marker or a marker binding partner can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated marker protein or target molecules can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the protein-immobilized surfaces can be prepared in advance and stored.

In order to conduct the assay, the corresponding partner of the immobilized assay component is exposed to the coated surface with or without the test compound. After the reaction is complete, unreacted assay components are removed (*e.g.*, by washing) and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the non-immobilized component is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the non-immobilized component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; *e.g.*, using a labeled antibody specific for the initially non-immobilized species (the antibody, in turn, can be directly labeled or indirectly labeled with, *e.g.*, a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which modulate (inhibit or enhance) complex formation or which disrupt preformed complexes can be detected.

In an alternate embodiment of the invention, a homogeneous assay may be used. This is typically a reaction, analogous to those mentioned above, which is conducted in a liquid phase in the presence or absence of the test compound. The formed complexes are then separated from unreacted components, and the amount of complex formed is determined. As mentioned for heterogeneous assay systems, the order of addition of reactants to the liquid phase can yield information about which test compounds modulate (inhibit or enhance) complex formation and which disrupt preformed complexes.

In such a homogeneous assay, the reaction products may be separated from unreacted assay components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In

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differential centrifugation, complexes of molecules may be separated from uncomplexed molecules through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., *Trends Biochem Sci* 1993 Aug;18(8):284-7). Standard chromatographic techniques may also be utilized to

5 separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the complex as compared to the uncomplexed molecules may be exploited to differentially separate the

10 complex from the remaining individual reactants, for example through the use of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, 1998, *J Mol. Recognit.* 11:141-148; Hage and Tweed, 1997, *J. Chromatogr. B. Biomed. Sci. Appl.*, 699:499-525). Gel electrophoresis may also be employed to separate complexed molecules from unbound species (see, *e.g.*, Ausubel *et al* (eds.), In: Current

15 Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, nondenaturing gels in the absence of reducing agent are typically preferred, but conditions appropriate to the particular interactants will be well known to one skilled in the art. Immunoprecipitation is another common technique utilized

20 for the isolation of a protein-protein complex from solution (see, *e.g.*, Ausubel *et al* (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, all proteins binding to an antibody specific to one of the binding molecules are precipitated from solution by conjugating the antibody to a polymer bead that may be readily collected by centrifugation. The bound assay components are released from the beads (through a specific

25 proteolysis event or other technique well known in the art which will not disturb the protein-protein interaction in the complex), and a second immunoprecipitation step is performed, this time utilizing antibodies specific for the correspondingly different interacting assay component. In this manner, only formed complexes should remain attached to the beads. Variations in complex formation in both the presence and the absence of a test compound can be compared, thus offering information

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about the ability of the compound to modulate interactions between the marker and its binding partner.

Also within the scope of the present invention are methods for direct detection of interactions between the marker and its natural binding partner and/or a test compound in a homogeneous or heterogeneous assay system without further sample manipulation. For example, the technique of fluorescence energy transfer may be utilized (see, *e.g.*, Lakowicz *et al*, U.S. Patent No. 5,631,169; Stavrianopoulos *et al*, U.S. Patent No. 4,868,103). Generally, this technique involves the addition of a fluorophore label on a first 'donor' molecule (*e.g.*, marker or test compound) such that its emitted fluorescent energy will be absorbed by a fluorescent label on a second, 'acceptor' molecule (*e.g.*, marker or test compound), which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter). A test substance which either enhances or hinders participation of one of the species in the preformed complex will result in the generation of a signal variant to that of background. In this way, test substances that modulate interactions between a marker and its binding partner can be identified in controlled assays.

In another embodiment, modulators of marker expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of mRNA or protein, corresponding to a marker in the cell, is determined. The level of expression of mRNA or protein in the presence of the candidate compound is compared to the level of expression of mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of marker expression based on this comparison. For example, when expression of marker mRNA or protein is greater (statistically significantly greater) in the presence of the

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candidate compound than in its absence, the candidate compound is identified as a stimulator of marker mRNA or protein expression. Conversely, when expression of marker mRNA or protein is less (statistically significantly less) in the presence of the candidate compound than in its absence, the candidate compound is identified as an inhibitor of marker mRNA or protein expression. The  
5 level of marker mRNA or protein expression in the cells can be determined by methods described herein for detecting marker mRNA or protein.

In another aspect, the invention pertains to a combination of two or more of the assays described herein. For example, a modulating agent can be identified using a cell-based or a cell free assay, and the ability of the agent to modulate the activity of a marker protein can be  
10 further confirmed *in vivo*, *e.g.*, in a whole animal model for cellular transformation and/or tumorigenesis.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as  
15 described herein (*e.g.*, an marker modulating agent, an antisense marker nucleic acid molecule, an marker-specific antibody, or an marker-binding partner) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by  
20 the above-described screening assays for treatments as described herein.

It is understood that appropriate doses of small molecule agents and protein or polypeptide agents depends upon a number of factors within the knowledge of the ordinarily skilled physician, veterinarian, or researcher. The dose(s) of these agents will vary, for example, depending upon the identity, size, and condition of the subject or sample being treated, further  
25 depending upon the route by which the composition is to be administered, if applicable, and the effect which the practitioner desires the agent to have upon the nucleic acid or polypeptide of the invention. Exemplary doses of a small molecule include milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 500 milligrams per kilogram, about 100 micrograms per kilogram to about 5 milligrams per kilogram, or about 1

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microgram per kilogram to about 50 micrograms per kilogram). Exemplary doses of a protein or polypeptide include gram, milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 5 grams per kilogram, about 100 micrograms per kilogram to about 500 milligrams per kilogram, or about 1 milligram per kilogram to about 50 milligrams per kilogram). It is furthermore understood that appropriate doses of one of these agents depend upon the potency of the agent with respect to the expression or activity to be modulated. Such appropriate doses can be determined using the assays described herein. When one or more of these agents is to be administered to an animal (*e.g.* a human) in order to modulate expression or activity of a polypeptide or nucleic acid of the invention, a physician, veterinarian, or researcher can, for example, prescribe a relatively low dose at first, subsequently increasing the dose until an appropriate response is obtained. In addition, it is understood that the specific dose level for any particular animal subject will depend upon a variety of factors including the activity of the specific agent employed, the age, body weight, general health, gender, and diet of the subject, the time of administration, the route of administration, the rate of excretion, any drug combination, and the degree of expression or activity to be modulated.

A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, *e.g.*, intravenous, intradermal, subcutaneous, oral (*e.g.*, inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediamine-tetraacetic acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous

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preparation of sterile injectable solutions or dispersions. For intravenous administration, suitable carriers include physiological saline, bacteriostatic water, Cremophor EL (BASF; Parsippany, NJ) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants. Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound (e.g., a polypeptide or antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle which contains a basic dispersion medium, and then incorporating the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules. Oral compositions can also be prepared using a fluid carrier for use as

a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed.

Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches, and the like can contain  
5 any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

10 For administration by inhalation, the compounds are delivered in the form of an aerosol spray from a pressurized container or dispenser which contains a suitable propellant, *e.g.*, a gas such as carbon dioxide, or a nebulizer.

Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated  
15 are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

20 The compounds can also be prepared in the form of suppositories (*e.g.*, with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation,  
25 including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes having monoclonal

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antibodies incorporated therein or thereon) can also be used as pharmaceutically acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Patent No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound and the particular therapeutic effect to be achieved, and the limitations inherent in the art of compounding such an active compound for the treatment of individuals.

For antibodies, the preferred dosage is 0.1 mg/kg to 100 mg/kg of body weight (generally 10 mg/kg to 20 mg/kg). If the antibody is to act in the brain, a dosage of 50 mg/kg to 100 mg/kg is usually appropriate. Generally, partially human antibodies and fully human antibodies have a longer half-life within the human body than other antibodies. Accordingly, lower dosages and less frequent administration is often possible. Modifications such as lipidation can be used to stabilize antibodies and to enhance uptake and tissue penetration (*e.g.*, into the prostate epithelium). A method for lipidation of antibodies is described by Cruikshank *et al.* (1997) *J. Acquired Immune Deficiency Syndromes and Human Retrovirology* 14:193.

The nucleic acid molecules corresponding to a marker of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by, for example, intravenous injection, local administration (U.S. Patent 5,328,470), or by stereotactic injection (see, *e.g.*, Chen *et al.*, 1994, *Proc. Natl. Acad. Sci. USA* 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells, *e.g.* retroviral vectors, the pharmaceutical preparation can include one or more cells which produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

#### V. Computer Readable Means and Arrays

5 Computer readable media comprising a marker(s) of the present invention is also provided. As used herein, "computer readable media" refers to any medium that can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories  
10 such as magnetic/optical storage media. The skilled artisan will readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a marker of the present invention.

As used herein, "recorded" refers to a process for storing information on computer readable medium. Those skilled in the art can readily adopt any of the presently known methods for  
15 recording information on computer readable medium to generate manufactures comprising the markers of the present invention.

A variety of data processor programs and formats can be used to store the marker information of the present invention on computer readable medium. For example, the nucleic acid sequence corresponding to the markers can be represented in a word processing text file, formatted  
20 in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. Any number of dataprocessor structuring formats (*e.g.*, text file or database) may be adapted in order to obtain computer readable medium having recorded thereon the markers of the present invention.

25 By providing the markers of the invention in computer readable form, one can routinely access the marker sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of the invention in computer readable form to compare a target sequence or target structural motif with the sequence information

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stored within the data storage means. Search means are used to identify fragments or regions of the sequences of the invention which match a particular target sequence or target motif.

The invention also includes an array comprising a marker(s) of the present invention. The array can be used to assay expression of one or more genes in the array. In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development and differentiation, tumor progression, progression of other diseases, *in vitro* processes, such a cellular transformation and senescence, autonomic neural and neurological processes, such as, for example, pain and appetite, and cognitive functions, such as learning or memory.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

5           The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

10    VI. Predictive Medicine

          The present invention pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trials are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining the level of expression of polypeptides or nucleic acids corresponding to one or more markers of the invention, in order to determine  
15       whether an individual is at risk of developing prostate cancer. Such assays can be used for prognostic or predictive purposes to thereby prophylactically treat an individual prior to the onset of the cancer.

          Yet another aspect of the invention pertains to monitoring the influence of agents  
20       (e.g., drugs or other compounds administered either to inhibit prostate cancer or to treat or prevent any other disorder {i.e. in order to understand any prostate carcinogenic effects that such treatment may have} ) on the expression or activity of a marker of the invention in clinical trials. These and other agents are described in further detail in the following sections.

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A. Diagnostic Assays

An exemplary method for detecting the presence or absence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample involves obtaining a biological sample (*e.g.* a prostate smear) from a test subject and contacting the biological sample with a compound or an agent capable of detecting the polypeptide or nucleic acid (*e.g.*, mRNA, genomic DNA, or cDNA). The detection methods of the invention can thus be used to detect mRNA, protein, cDNA, or genomic DNA, for example, in a biological sample *in vitro* as well as *in vivo*. For example, *in vitro* techniques for detection of mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detection of a polypeptide corresponding to a marker of the invention include enzyme linked immunosorbent assays (ELISAs), Western blots, immunoprecipitations, immunohistochemistry and immunofluorescence. *In vitro* techniques for detection of genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of a polypeptide corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the polypeptide. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

A general principle of such diagnostic and prognostic assays involves preparing a sample or reaction mixture that may contain a marker, and a probe, under appropriate conditions and for a time sufficient to allow the marker and probe to interact and bind, thus forming a complex that can be removed and/or detected in the reaction mixture. These assays can be conducted in a variety of ways.

For example, one method to conduct such an assay would involve anchoring the marker or probe onto a solid phase support, also referred to as a substrate, and detecting target marker/probe complexes anchored on the solid phase at the end of the reaction. In one embodiment of such a method, a sample from a subject, which is to be assayed for presence and/or concentration of marker, can be anchored onto a carrier or solid phase support. In another embodiment, the reverse situation is possible, in which the probe can be anchored to a solid phase and a sample from a subject can be allowed to react as an unanchored component of the assay.



There are many established methods for anchoring assay components to a solid phase. These include, without limitation, marker or probe molecules which are immobilized through conjugation of biotin and streptavidin. Such biotinylated assay components can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*,  
5 biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the surfaces with immobilized assay components can be prepared in advance and stored.

Other suitable carriers or solid phase supports for such assays include any material capable of binding the class of molecule to which the marker or probe belongs. Well-known  
10 supports or carriers include, but are not limited to, glass, polystyrene, nylon, polypropylene, nylon, polyethylene, dextran, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

In order to conduct assays with the above mentioned approaches, the non-immobilized component is added to the solid phase upon which the second component is anchored.  
15 After the reaction is complete, uncomplexed components may be removed (*e.g.*, by washing) under conditions such that any complexes formed will remain immobilized upon the solid phase. The detection of marker/probe complexes anchored to the solid phase can be accomplished in a number of methods outlined herein.

In a preferred embodiment, the probe, when it is the unanchored assay component,  
20 can be labeled for the purpose of detection and readout of the assay, either directly or indirectly, with detectable labels discussed herein and which are well-known to one skilled in the art.

It is also possible to directly detect marker/probe complex formation without further manipulation or labeling of either component (marker or probe), for example by utilizing the technique of fluorescence energy transfer (see, for example, Lakowicz *et al.*, U.S. Patent No.  
25 5,631,169; Stavrianopoulos, *et al.*, U.S. Patent No. 4,868,103). A fluorophore label on the first, 'donor' molecule is selected such that, upon excitation with incident light of appropriate wavelength, its emitted fluorescent energy will be absorbed by a fluorescent label on a second 'acceptor' molecule, which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues.

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Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (e.g., using a fluorimeter).

In another embodiment, determination of the ability of a probe to recognize a marker can be accomplished without labeling either assay component (probe or marker) by utilizing a technology such as real-time Biomolecular Interaction Analysis (BIA) (see, e.g., Sjolander, S. and Urbaniczky, C., 1991, *Anal. Chem.* 63:2338-2345 and Szabo *et al.*, 1995, *Curr. Opin. Struct. Biol.* 5:699-705). As used herein, "BIA" or "surface plasmon resonance" is a technology for studying biospecific interactions in real time, without labeling any of the interactants (e.g., BIAcore). Changes in the mass at the binding surface (indicative of a binding event) result in alterations of the refractive index of light near the surface (the optical phenomenon of surface plasmon resonance (SPR)), resulting in a detectable signal which can be used as an indication of real-time reactions between biological molecules.

Alternatively, in another embodiment, analogous diagnostic and prognostic assays can be conducted with marker and probe as solutes in a liquid phase. In such an assay, the complexed marker and probe are separated from uncomplexed components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, marker/probe complexes may be separated from uncomplexed assay components through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., 1993, *Trends Biochem Sci.* 18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components.

Similarly, the relatively different charge properties of the marker/probe complex as compared to the uncomplexed components may be exploited to differentiate the complex from uncomplexed components, for example through the utilization of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, N.H., 1998, *J. Mol. Recognit.* Winter 11(1-6):14\_\_\_; Hage, D.S., and Tweed, S.A. *J Chromatogr B Biomed Sci Appl* 1997 Oct 10;699(1-2):499-525). Gel electrophoresis may also be employed to separate complexed assay components from unbound components (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York, 1987-1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, non-denaturing gel matrix materials and conditions in the absence of reducing agent are typically preferred. Appropriate conditions to the particular assay and components thereof will be well known to one skilled in the art.

In a particular embodiment, the level of mRNA corresponding to the marker can be determined both by *in situ* and by *in vitro* formats in a biological sample using methods known in the art. The term "biological sample" is intended to include tissues, cells, biological fluids and isolates thereof, isolated from a subject, as well as tissues, cells and fluids present within a subject. Many expression detection methods use isolated RNA. For *in vitro* methods, any RNA isolation technique that does not select against the isolation of mRNA can be utilized for the purification of RNA from prostate cells (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York 1987-1999). Additionally, large numbers of tissue samples can readily be processed using techniques well known to those of skill in the art, such as, for example, the single-step RNA isolation process of Chomczynski (1989, U.S. Patent No. 4,843,155).

The isolated mRNA can be used in hybridization or amplification assays that include, but are not limited to, Southern or Northern analyses, polymerase chain reaction analyses and probe arrays. One preferred diagnostic method for the detection of mRNA levels involves contacting the isolated mRNA with a nucleic acid molecule (probe) that can hybridize to the mRNA encoded by the gene being detected. The nucleic acid probe can be, for example, a full-length cDNA, or a portion thereof, such as an oligonucleotide of at least 7, 15, 30, 50, 100, 250 or 500

nucleotides in length and sufficient to specifically hybridize under stringent conditions to a mRNA or genomic DNA encoding a marker of the present invention. Other suitable probes for use in the diagnostic assays of the invention are described herein. Hybridization of an mRNA with the probe indicates that the marker in question is being expressed.

5           In one format, the mRNA is immobilized on a solid surface and contacted with a probe, for example by running the isolated mRNA on an agarose gel and transferring the mRNA from the gel to a membrane, such as nitrocellulose. In an alternative format, the probe(s) are immobilized on a solid surface and the mRNA is contacted with the probe(s), for example, in an Affymetrix gene chip array. A skilled artisan can readily adapt known mRNA detection methods  
10   for use in detecting the level of mRNA encoded by the markers of the present invention.

          An alternative method for determining the level of mRNA corresponding to a marker of the present invention in a sample involves the process of nucleic acid amplification, *e.g.*, by rtPCR (the experimental embodiment set forth in Mullis, 1987, U.S. Patent No. 4,683,202), ligase chain reaction (Barany, 1991, *Proc. Natl. Acad. Sci. USA*, 88:189-193), self sustained sequence  
15   replication (Guatelli *et al.*, 1990, *Proc. Natl. Acad. Sci. USA* 87:1874-1878), transcriptional amplification system (Kwoh *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:1173-1177), Q-Beta Replicase (Lizardi *et al.*, 1988, *Bio/Technology* 6:1197), rolling circle replication (Lizardi *et al.*, U.S. Patent No. 5,854,033) or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These  
20   detection schemes are especially useful for the detection of nucleic acid molecules if such molecules are present in very low numbers. As used herein, amplification primers are defined as being a pair of nucleic acid molecules that can anneal to 5' or 3' regions of a gene (plus and minus strands, respectively, or vice-versa) and contain a short region in between. In general, amplification primers are from about 10 to 30 nucleotides in length and flank a region from about 50 to 200  
25   nucleotides in length. Under appropriate conditions and with appropriate reagents, such primers permit the amplification of a nucleic acid molecule comprising the nucleotide sequence flanked by the primers.

          For *in situ* methods, mRNA does not need to be isolated from the prostate cells prior to detection. In such methods, a cell or tissue sample is prepared/processed using known

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histological methods. The sample is then immobilized on a support, typically a glass slide, and then contacted with a probe that can hybridize to mRNA that encodes the marker.

As an alternative to making determinations based on the absolute expression level of the marker, determinations may be based on the normalized expression level of the marker.

- 5 Expression levels are normalized by correcting the absolute expression level of a marker by comparing its expression to the expression of a gene that is not a marker, *e.g.*, a housekeeping gene that is constitutively expressed. Suitable genes for normalization include housekeeping genes such as the actin gene, or epithelial cell-specific genes. This normalization allows the comparison of the expression level in one sample, *e.g.*, a patient sample, to another sample, *e.g.*, a non-prostate cancer sample, or between samples from different sources.

- Alternatively, the expression level can be provided as a relative expression level. To determine a relative expression level of a marker, the level of expression of the marker is determined for 10 or more samples of normal versus cancer cell isolates, preferably 50 or more samples, prior to the determination of the expression level for the sample in question. The mean expression level of each of the genes assayed in the larger number of samples is determined and this is used as a baseline expression level for the marker. The expression level of the marker determined for the test sample (absolute level of expression) is then divided by the mean expression value obtained for that marker. This provides a relative expression level.

- Preferably, the samples used in the baseline determination will be from prostate cancer or from non-prostate cancer cells of prostate tissue. The choice of the cell source is dependent on the use of the relative expression level. Using expression found in normal tissues as a mean expression score aids in validating whether the marker assayed is prostate specific (versus normal cells). In addition, as more data is accumulated, the mean expression value can be revised, providing improved relative expression values based on accumulated data. Expression data from prostate cells provides a means for grading the severity of the prostate cancer state.

In another embodiment of the present invention, a polypeptide corresponding to a marker is detected. A preferred agent for detecting a polypeptide of the invention is an antibody capable of binding to a polypeptide corresponding to a marker of the invention, preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal.

An intact antibody, or a fragment thereof (*e.g.*, Fab or F(ab')<sub>2</sub>) can be used. The term "labeled", with regard to the probe or antibody, is intended to encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly  
5 labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin.

Proteins from prostate cells can be isolated using techniques that are well known to those of skill in the art. The protein isolation methods employed can, for example, be such as those  
10 described in Harlow and Lane (Harlow and Lane, 1988, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York).

A variety of formats can be employed to determine whether a sample contains a protein that binds to a given antibody. Examples of such formats include, but are not limited to, enzyme immunoassay (EIA), radioimmunoassay (RIA), Western blot analysis,  
15 immunohistochemistry and enzyme linked immunoabsorbant assay (ELISA). A skilled artisan can readily adapt known protein/antibody detection methods for use in determining whether prostate cells express a marker of the present invention.

In one format, antibodies, or antibody fragments, can be used in methods such as Western blots, immunohistochemistry or immunofluorescence techniques to detect the expressed  
20 proteins. In such uses, it is generally preferable to immobilize either the antibody, proteins, or cells containing proteins, on a solid support. Well-known supports or carriers include glass, polystyrene, polypropylene, polyethylene, dextran, nylon, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

One skilled in the art will know many other suitable carriers for binding antibody or  
25 antigen, and will be able to adapt such support for use with the present invention. For example, protein isolated from prostate cells can be run on a polyacrylamide gel electrophoresis and immobilized onto a solid phase support such as nitrocellulose. The support can then be washed with suitable buffers followed by treatment with the detectably labeled antibody. The solid phase

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support can then be washed with the buffer a second time to remove unbound antibody. The amount of bound label on the solid support can then be detected by conventional means.

The invention also encompasses kits for detecting the presence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample (*e.g.* a prostate sample). Such kits can be used to determine if a subject is suffering from or is at increased risk of developing prostate cancer. For example, the kit can comprise a labeled compound or agent capable of detecting a polypeptide or an mRNA encoding a polypeptide corresponding to a marker of the invention in a biological sample and means for determining the amount of the polypeptide or mRNA in the sample (*e.g.*, an antibody which binds the polypeptide or an oligonucleotide probe which binds to DNA or mRNA encoding the polypeptide). Kits can also include instructions for interpreting the results obtained using the kit.

For antibody-based kits, the kit can comprise, for example: (1) a first antibody (*e.g.*, attached to a solid support) which binds to a polypeptide corresponding to a marker of the invention; and, optionally, (2) a second, different antibody which binds to either the polypeptide or the first antibody and is conjugated to a detectable label.

For oligonucleotide-based kits, the kit can comprise, for example: (1) an oligonucleotide, *e.g.*, a detectably labeled oligonucleotide, which hybridizes to a nucleic acid sequence encoding a polypeptide corresponding to a marker of the invention or (2) a pair of primers useful for amplifying a nucleic acid molecule corresponding to a marker of the invention. The kit can also comprise, *e.g.*, a buffering agent, a preservative, or a protein stabilizing agent. The kit can further comprise components necessary for detecting the detectable label (*e.g.*, an enzyme or a substrate). The kit can also contain a control sample or a series of control samples which can be assayed and compared to the test sample. Each component of the kit can be enclosed within an individual container and all of the various containers can be within a single package, along with instructions for interpreting the results of the assays performed using the kit.

#### B. Pharmacogenomics

Agents or modulators which have a stimulatory or inhibitory effect on expression of a marker of the invention can be administered to individuals to treat (prophylactically or

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therapeutically) prostate cancer in the patient. In conjunction with such treatment, the pharmacogenomics (*i.e.*, the study of the relationship between an individual's genotype and that individual's response to a foreign compound or drug) of the individual may be considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (*e.g.*, drugs) for prophylactic or therapeutic treatments based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate dosages and therapeutic regimens. Accordingly, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual.

Pharmacogenomics deals with clinically significant variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See, *e.g.*, Linder (1997) *Clin. Chem.* 43(2):254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic conditions transmitted as a single factor altering the way drugs act on the body are referred to as "altered drug action." Genetic conditions transmitted as single factors altering the way the body acts on drugs are referred to as "altered drug metabolism". These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is hemolysis after ingestion of oxidant drugs (anti-malarials, sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (*e.g.*, N-acetyltransferase 2 (NAT 2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly



polymorphic and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses. If a metabolite is the active therapeutic moiety, a PM will show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6-formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a modulator of expression of a marker of the invention.

This invention also provides a process for preparing a database comprising at least one of the markers set forth in Tables 1-1 to 6. For example, the polynucleotide sequences are stored in a digital storage medium such that a data processing system for standardized representation of the genes that identify a prostate cancer cell is compiled. The data processing system is useful to analyze gene expression between two cells by first selecting a cell suspected of being of a neoplastic phenotype or genotype and then isolating polynucleotides from the cell. The isolated polynucleotides are sequenced. The sequences from the sample are compared with the sequence(s) present in the database using homology search techniques. Greater than 90%, more preferably greater than 95% and more preferably, greater than or equal to 97% sequence identity between the test sequence and the polynucleotides of the present invention is a positive indication that the polynucleotide has been isolated from a prostate cancer cell as defined above.

In an alternative embodiment, the polynucleotides of this invention are sequenced and the information regarding sequence and in some embodiments, relative expression, is stored in any functionally relevant program, *e.g.*, in Compare Report using the SAGE software (available

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though Dr. Ken Kinzler at John Hopkins University). The Compare Report provides a tabulation of the polynucleotide sequences and their abundance for the samples normalized to a defined number of polynucleotides per library (say 25,000). This is then imported into MS-ACCESS either directly or via copying the data into an Excel spreadsheet first and then from there into MS-ACCESS for additional manipulations. Other programs such as SYBASE or Oracle that permit the comparison of polynucleotide numbers could be used as alternatives to MS-ACCESS. Enhancements to the software can be designed to incorporate these additional functions. These functions consist in standard Boolean, algebraic, and text search operations, applied in various combinations to reduce a large input set of polynucleotides to a manageable subset of a polynucleotide of specifically defined interest.

One skilled in the art may create groups containing one or more project(s) by combining the counts of specific polynucleotides within a group (*e.g.*,  $\text{GroupNormal} = \text{Normal1} + \text{Normal2}$ ,  $\text{GroupTumor1} + \text{TumorCellLine}$ ). Additional characteristic values are also calculated for each tag in the group (*e.g.*, average count, minimum count, maximum count). One skilled in the art may calculate individual tag count ratios between groups, for example the ratio of the average GroupNormal count to the average GroupTumor count for each polynucleotide. A statistical measure of the significance of observed differences in tag counts between groups may be calculated.

#### C. Monitoring Clinical Trials

Monitoring the influence of agents (*e.g.*, drug compounds) on the level of expression of a marker of the invention can be applied not only in basic drug screening, but also in clinical trials. For example, the effectiveness of an agent to affect marker expression can be monitored in clinical trials of subjects receiving treatment for prostate cancer. In a preferred embodiment, the present invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (*e.g.*, an agonist, antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) comprising the steps of (i) obtaining a pre-administration sample from a subject prior to administration of the agent; (ii) detecting the level of expression of one or more selected markers of the invention in the pre-administration sample; (iii) obtaining one or more

post-administration samples from the subject; (iv) detecting the level of expression of the marker(s) in the post-administration samples; (v) comparing the level of expression of the marker(s) in the pre-administration sample with the level of expression of the marker(s) in the post-administration sample or samples; and (vi) altering the administration of the agent to the subject accordingly. For example, increased administration of the agent can be desirable to increase expression of the marker(s) to higher levels than detected, *i.e.*, to increase the effectiveness of the agent. Alternatively, decreased administration of the agent can be desirable to decrease expression of the marker(s) to lower levels than detected, *i.e.*, to decrease the effectiveness of the agent.

10                    D. Surrogate Markers

15                    The markers of the invention may serve as surrogate markers for one or more disorders or disease states or for conditions leading up to disease states, and in particular, prostate cancer. As used herein, a “surrogate marker” is an objective biochemical marker which correlates with the absence or presence of a disease or disorder, or with the progression of a disease or disorder (*e.g.*, with the presence or absence of a tumor). The presence or quantity of such markers is independent of the disease. Therefore, these markers may serve to indicate whether a particular course of treatment is effective in lessening a disease state or disorder. Surrogate markers are of particular use when the presence or extent of a disease state or disorder is difficult to assess through standard methodologies (*e.g.*, early stage tumors), or when an assessment of disease progression is desired before a potentially dangerous clinical endpoint is reached (*e.g.*, an assessment of cardiovascular disease may be made using cholesterol levels as a surrogate marker, and an analysis of HIV infection may be made using HIV RNA levels as a surrogate marker, well in advance of the undesirable clinical outcomes of myocardial infarction or fully-developed AIDS). Examples of the use of surrogate markers in the art include: Koomen *et al.* (2000) *J. Mass. Spectrom.* 35: 258-264; and James (1994) *AIDS Treatment News Archive* 209.

25                    The markers of the invention are also useful as pharmacodynamic markers. As used herein, a “pharmacodynamic marker” is an objective biochemical marker which correlates specifically with drug effects. The presence or quantity of a pharmacodynamic marker is not related to the disease state or disorder for which the drug is being administered; therefore, the presence or quantity of the

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marker is indicative of the presence or activity of the drug in a subject. For example, a pharmacodynamic marker may be indicative of the concentration of the drug in a biological tissue, in that the marker is either expressed or transcribed or not expressed or transcribed in that tissue in relationship to the level of the drug. In this fashion, the distribution or uptake of the drug may be monitored by the pharmacodynamic marker. Similarly, the presence or quantity of the pharmacodynamic marker may be related to the presence or quantity of the metabolic product of a drug, such that the presence or quantity of the marker is indicative of the relative breakdown rate of the drug *in vivo*. Pharmacodynamic markers are of particular use in increasing the sensitivity of detection of drug effects, particularly when the drug is administered in low doses. Since even a small amount of a drug may be sufficient to activate multiple rounds of marker transcription or expression, the amplified marker may be in a quantity which is more readily detectable than the drug itself. Also, the marker may be more easily detected due to the nature of the marker itself; for example, using the methods described herein, antibodies may be employed in an immune-based detection system for a protein marker, or marker-specific radiolabeled probes may be used to detect a mRNA marker. Furthermore, the use of a pharmacodynamic marker may offer mechanism-based prediction of risk due to drug treatment beyond the range of possible direct observations. Examples of the use of pharmacodynamic markers in the art include: Matsuda *et al.* US 6,033,862; Hattis *et al.* (1991) *Env. Health Perspect.* 90: 229-238; Schentag (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S21-S24; and Nicolau (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S16-S20.

The markers of the invention are also useful as pharmacogenomic markers. As used herein, a "pharmacogenomic marker" is an objective biochemical marker which correlates with a specific clinical drug response or susceptibility in a subject (see, e.g., McLeod *et al.* (1999) *Eur. J. Cancer* 35(12): 1650-1652). The presence or quantity of the pharmacogenomic marker is related to the predicted response of the subject to a specific drug or class of drugs prior to administration of the drug. By assessing the presence or quantity of one or more pharmacogenomic markers in a subject, a drug therapy which is most appropriate for the subject, or which is predicted to have a greater degree of success, may be selected. For example, based on the presence or quantity of RNA or protein for specific tumor markers in a subject, a drug or course of treatment may be selected that is optimized for the treatment of the specific tumor likely to be present in the subject.

Similarly, the presence or absence of a specific sequence mutation in marker DNA may correlate with drug response. The use of pharmacogenomic markers therefore permits the application of the most appropriate treatment for each subject without having to administer the therapy.

5 VII. Electronic Apparatus Readable Media and Arrays

Electronic apparatus readable media comprising a prostate cancer marker of the present invention is also provided. As used herein, "electronic apparatus readable media" refers to any suitable medium for storing, holding or containing data or information that can be read and accessed directly by an electronic apparatus. Such media can include, but are not limited to:

10 magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as compact disc; electronic storage media such as RAM, ROM, EPROM, EEPROM and the like; general hard disks and hybrids of these categories such as magnetic/optical storage media. The medium is adapted or configured for having recorded thereon a marker of the present invention.

15 As used herein, the term "electronic apparatus" is intended to include any suitable computing or processing apparatus or other device configured or adapted for storing data or information. Examples of electronic apparatus suitable for use with the present invention include stand-alone computing apparatus; networks, including a local area network (LAN), a wide area network (WAN) Internet, Intranet, and Extranet; electronic appliances such as a personal digital

20 assistants (PDAs), cellular phone, pager and the like; and local and distributed processing systems.

As used herein, "recorded" refers to a process for storing or encoding information on the electronic apparatus readable medium. Those skilled in the art can readily adopt any of the presently known methods for recording information on known media to generate manufactures comprising the markers of the present invention.

25 A variety of software programs and formats can be used to store the marker information of the present invention on the electronic apparatus readable medium. For example, the nucleic acid sequence corresponding to the markers can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase,

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Oracle, or the like, as well as in other forms. Any number of dataprocessor structuring formats (e.g., text file or database) may be employed in order to obtain or create a medium having recorded thereon the markers of the present invention.

By providing the markers of the invention in readable form, one can routinely access the marker sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of the present invention in readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequences of the invention which match a particular target sequence or target motif.

The present invention therefore provides a medium for holding instructions for performing a method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer, wherein the method comprises the steps of determining the presence or absence of a prostate cancer marker and based on the presence or absence of the prostate cancer marker, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer and/or recommending a particular treatment for the prostate cancer or pre-prostate cancer condition.

The present invention further provides in an electronic system and/or in a network, a method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer associated with a prostate cancer marker wherein the method comprises the steps of determining the presence or absence of the prostate cancer marker, and based on the presence or absence of the prostate cancer marker, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer, and/or recommending a particular treatment for the prostate cancer or pre-prostate cancer condition. The method may further comprise the step of receiving phenotypic information associated with the subject and/or acquiring from a network phenotypic information associated with the subject.

The present invention also provides in a network, a method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer associated with a prostate cancer marker, said method comprising the steps of receiving information associated with the prostate cancer marker receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the prostate cancer marker and/or prostate cancer, and based on

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one or more of the phenotypic information, the prostate cancer marker, and the acquired information, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer. The method may further comprise the step of recommending a particular treatment for the prostate cancer or pre- prostate cancer condition.

5           The present invention also provides a business method for determining whether a subject has prostate cancer or a pre-disposition to prostate cancer, said method comprising the steps of receiving information associated with the prostate cancer marker, receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the prostate cancer marker and/or prostate cancer, and based on one or more of the phenotypic information, the prostate cancer marker, and the acquired information, determining whether the subject has prostate cancer or a pre-disposition to prostate cancer. The method may further comprise the step of recommending a particular treatment for the prostate cancer or pre- prostate cancer condition.

10           The invention also includes an array comprising a prostate cancer marker of the present invention. The array can be used to assay expression of one or more genes in the array. In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

15           In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or

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otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

5 In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development of prostate cancer, progression of prostate cancer, and processes, such a cellular transformation associated with prostate cancer.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

15

## VIII. Experimental Protocol

### A. Subtracted Libraries and Transcript Profiling

Subtracted libraries are generated using a PCR based method that allows the isolation of clones expressed at higher levels in one population of mRNA (tester) compared to another population (driver). Both tester and driver mRNA populations are converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Tester and driver cDNAs are then hybridized using the PCR-Select cDNA subtraction kit from Clontech. This technique results in both subtraction and normalization, which is an equalization of copy number of low-abundance and high-abundance sequences. After generation of the subtractive libraries, a group of 96 or more clones from each library is tested to confirm differential expression by reverse Southern hybridization.

25

SEQ ID NOS: 1-7511 (of Table 3-1) were identified through the above-described subtractive library hybridization techniques. In Table 3-1, SEQ ID NOS: 1-1240 were from Library cMhqaa; SEQ ID NOS: 1241-2805 were from Library cMhqab; SEQ ID NOS: 2806-4723 were

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from Library cMhqac; SEQ ID NOS: 4724-5247 were from Library cMhqag; SEQ ID NOS: 5248-6897 were from Library cMhqad; and, SEQ ID NOS: 6898-7511 were from Library cMhqaf. The “tester” source for two of these subtracted libraries, cMhqaa and cMhqab, was comprised of cDNA generated from stage T3NO tumors. The “driver” source for the library-designated cMhqaa was

5 cDNA prepared from benign prostate hyperplasia and activated lymphocytes [B cells, T cells (CD4 and CD8)]. The driver cDNA for the cMhqab library was prepared from benign prostate hyperplasia cDNA. The “tester” source for the cMhqac and cMhqag subtracted libraries was stage T2 and T3 cDNA derived from prostate cancer patients with poor clinical outcome, whose cancer had recurred following surgery. The “driver” source for these subtracted libraries (cMhqac and

10 cMhqag) was activated lymphocytes and stage T2 tumor cDNA that was obtained from patients who had a good clinical outcome and their disease had not recurred after surgery. The cMhqad-subtracted library was prepared using stage T2 tumor cDNA from patients that had a good clinical outcome as tester. The driver source for this library (cMhqad) was obtained from activated lymphocytes and stage T2 and T3 tumor samples recovered from patients whose cancer had

15 recurred following surgery. The tester for the cMhqaf library was cDNA obtained from the prostate cancer cell lines, DU145, LNCaP and PC3. The “driver” source for the cMhqaf-subtracted library was comprised of cDNA generated from a normal prostate cell strain, PrEC.

SEQ ID NOS: 7512-10054 (Table 3-3) were identified through the above-identified subtractive library hybridization techniques. These sequences were from Library cMhqae. The

20 “tester” source for Library cMhqae was comprised of cDNA generated from metastatic prostate cancer cell lines (Du145, PC3 and LNCaP). The “driver” source was comprised of cDNA generated from a normal prostate cell strain, PrEC. Table 3-4 includes sequences for the markers of Tables 3-3 which are found in non-public databases (*e.g.*, PREPATNUC).

SEQ ID NOS: 10055-15911 (Table 3-5) were identified through the above-identified subtractive library hybridization techniques. SEQ ID NOS: 10055-11680 were from Library

25 cMhqah; SEQ ID NOS: 11681-13328 were from Library cMhqai; and SEQ ID NOS: 13329-15911 were from Library cMhqak. This “tester” DNA was synthesized from membrane-associated polysomes mRNA separated from other mRNA’s (*i.e.*, cytosolic, nuclear, etc.) by density sedimentation equilibrium. The “driver” source was cDNA prepared from the non-membrane

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bound fraction (free cytosolic polysomes) obtained from the same density sedimentation equilibrium experiment. This mRNA was shown to be depleted of both secreted and membrane bound protein by profiling on the same 20K array. Table 3-6 includes sequences for the markers of Table 3-5 which are found in non-public databases (*e.g.*, PREPATNUC).

5           SEQ ID NOS: 1-7653 (of Table 4-1) were identified through the above-described subtractive library hybridization techniques. In Table 4-1, the listed markers can be found in the following databases:

	Sequences 1-1264	dbEST
	Sequences 1265-1912	GenBank
10	Sequences 1949-1964	PREPATNUC
	Sequences 1965-1970	dbEST
	Sequences 1971-1973	GenBank
	Sequences 1974-1981	dbEST
	Sequences 1982-2011	GenBank
15	Sequences 2012-3148	dbEST
	Sequences 3149-3687	GenBank
	Sequences 3688-3722	NUCPATENT
	Sequences 3723-3733	PREPATNUC
	Sequences 3734-3884	GenBank
20	Sequences 3885-4128	dbEST
	Sequences 4129-4143	NUCPATENT
	Sequences 4144-4152	PREPATNUC
	Sequences 4153-4174	GenBank
	Sequences 4175-4176	dbEST
25	Sequences 4177-4180	GenBank
	Sequences 4181-5009	dbEST
	Sequences 5010-5585	GenBank
	Sequences 5586-5613	NUCPATENT
	Sequence 5614	PREPATNUC
30	Sequences 5615-5717	GenBank
	Sequences 5718-5858	dbEST
	Sequences 5859-5864	NUCPATENT
	Sequence 5865	PREPATNUC
	Sequences 5866-5881	GenBank
35	Sequences 5882-7064	dbEST
	Sequences 7065-7573	GenBank
	Sequences 7574-7621	NUCPATENT
	Sequences 7622-7632	PREPATNUC
	Sequences 7633-7653	GenBank.

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For transcript profiling, nylon arrays are prepared by spotting purified PCR product onto a nylon membrane using a robotic gridding system linked to a sample database. Several thousand clones are spotted on each nylon filter. RNA or DNA from clinical samples (tumor and normal), and cell lines as well as from subtracted libraries, are used for hybridization against the nylon arrays. The RNA or DNA is labeled utilizing an *in vitro* reverse transcription reaction that contains a radiolabeled nucleotide that is incorporated during the reaction. Alternatively, mRNA is converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Hybridization experiments are carried out by combining labeled RNA or DNA samples with nylon filters in a hybridization chamber. Duplicate, independent hybridization experiments are performed to generate transcriptional profiling data. See, *Nature Genetics*, 21 (1999). Amplified cDNA is then radiolabelled using random priming with PRIME IT from Stratagene.

#### B. Proteomics

Proteins that are secreted by normal and transformed cells in culture are analyzed to identify those proteins that are likely to be secreted by cancerous cells into body fluids. Supernatants are isolated and MWT-CO filters are used to simplify the mixture of proteins. The proteins are then digested with trypsin. The tryptic peptides are loaded onto a microcapillary HPLC column where they are separated, and eluted directly into an ion trap mass spectrometer, through a custom-made electrospray ionization source. Throughout the gradient, sequence data is acquired through fragmentation of the four most intense ions (peptides) that elute off the column, while dynamically excluding those that have already been fragmented. In this way, approximately 2000 scans worth of sequence data are obtained, corresponding to approximately 50 to 200 different proteins in the sample. These data are searched against databases using correlation analysis tools, such as MS-Tag, to identify the proteins in the supernatants.

Protein profiling experiments were also undertaken to assess whether the proteins associated with the expression of individual markers of the invention are secreted. Transcriptional profiling experiments were performed on fractions of RNA that were obtained from either (a) endoplasmic reticulum-associated (ER-associated) ribosomes, or (b) free ribosomes. Eukaryotic

RNA which is isolated from ER-associated ribosomes tends to encode secreted and membrane bound proteins rather than intracellular proteins. Accordingly, markers of the invention which exhibit significantly enhanced expression in fractions of RNA from ER-associated ribosomes (in comparison with RNA from free ribosomes) are predicted to be associated with secreted proteins.

5

### C. Androgen Sensitivity Markers

A murine model was employed to generate prostate tumors from xenografts of human prostate tumor tissue (CWR22 model; see, e.g., Nagabhushan *et al.*, (1996) *Cancer Res.* 56:3042-3046; Pretlow *et al.*, (1993) *J. Natl. Cancer Inst.* 85:394-398). When the mice which carry  
10 such xenografts are castrated, the tumors generally regress due to androgen dependence. Some androgen-independent tumors will recur 3-10 months later (CWR22R tumors).

Transcriptional profiling was able to identify markers with significantly (ten-fold or greater) elevated expression in androgen-independent tumors (CWR22R) over androgen-dependent tumors (CWR22) under conditions of androgen presence (e.g. non-castrated animals) or androgen  
15 deprivation (e.g., 7 and 14 days post castration). Androgen-independent tumors are generally considered more clinically aggressive than androgen-dependant tumors.

### VIII. Summary Of The Data Provided In The Tables

The description for the fields of Tables 1-1 to 1-5 is listed below:

20 "Genbank Acc No." corresponds to the GenBank accession number assigned the particular sequence (see, for example <http://www.ncbi.nlm.nih.gov/Entrez/nucleotide.html>). All referenced GenBank sequences are expressly incorporated herein by reference.

"Clone" corresponds to the cDNA clone number from the IMAGE Consortium (see, for example Lennon, G., *et al.*, 1996, *Genomics* 33:151-152; and <http://www-bio.llnl.gov/bbrp/image/image.html>). All referenced IMAGE clone sequences are expressly  
25 incorporated herein by reference.

"Aver. of Tumors" corresponds to the average intensity of all the 5 stage T2NO tumors(MPM000115-119).

"Aver. of BPH" corresponds to the average intensity of the four BPH samples.

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“MPM-115/aver BPH” corresponds to the fold over-expression of the tumor MPM000115 compared to the average BPH intensity.

“MPM-116/aver BPH” corresponds to the fold over-expression of the tumor MPM000116 compared to the average BPH intensity.

5 “MPM-117/aver BPH” corresponds to the fold over-expression of the tumor MPM000117 compared to the average BPH intensity.

“MPM-118/aver BPH” corresponds to the fold over-expression of the tumor MPM000118 compared to the average BPH intensity.

10 “MPM-119/aver BPH” corresponds to the fold over-expression of the tumor MPM000119 compared to the average BPH intensity.

“Tumor Aver./aver BPH” corresponds to the fold difference of the Aver. Of Tumors compared to the aver BPH.

“Aver of Normals” corresponds to the average intensity of the four Normal (non-tumor) tissue samples.

15 “MPM-115/aver Normal” corresponds to the fold over-expression of the tumor MPM000115 compared to the average Normal intensity.

“MPM-116/aver Normal” corresponds to the fold over-expression of the tumor MPM000116 compared to the average Normal intensity.

20 “MPM-117/aver Normal” corresponds to the fold over-expression of the tumor MPM000117 compared to the average Normal intensity.

“MPM-118/aver Normal” corresponds to the fold over-expression of the tumor MPM000118 compared to the average Normal intensity.

“MPM-119/aver Normal” corresponds to the fold over-expression of the tumor MPM000119 compared to the average Normal intensity.

25 “Avg Fold” corresponds to the fold difference of Aver of Tumors compared to aver of Normals.

“Tumor/Normal” corresponds to the fold change in average of Tumors compared to average of Normals.

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“Tumor/BPH” corresponds to the fold change in average of Tumors compared to average of BPH.

“T/N 5X, $> 1/5$ ” indicates whether the sequence is expressed 5 fold or greater in at least 1 tumor compared to its expression in normal prostate.

5 “T/N 3X, $> 2/5$ ” indicates whether the sequence is expressed 3 fold or greater in at least 2 tumors compared to its expression in normal prostate.

“T/BPH 5X, $> 1/5$ ” indicates whether the sequence is expressed 5 fold or greater in at least 1 tumor compared to its expression in BPH.

10 “T/BPH 3X, $> 2/5$ ” indicates whether the sequence is expressed 3 fold or greater in at least 2 tumors compared to its expression in BPH.

“T/N 10X, $> 1/5$ ” indicates whether the sequence is expressed 10 fold or greater in at least 1 tumor compared to its expression in normal prostate.

“T/N 5X, $> 3/5$ ” indicates whether the sequence is expressed 5 fold or greater in at least 3 tumors compared to its expression in normal prostate.

15 “T/N 3X, $> 5/5$ ” indicates whether the sequence is expressed 3 fold or greater in all 5 tumors compared to its expression in normal prostate.

“T/BPH 10X, $> 1/5$ ” indicates whether the sequence is expressed 10 fold or greater in at least 1 tumor compared to its expression in BPH.

20 “T/BPH 5X, $> 3/5$ ” indicates whether the sequence is expressed 5 fold or greater in at least 3 tumors compared to its expression in BPH.

“T/BPH 3X, $> 5/5$ ” indicates whether the sequence is expressed 3 fold or greater in all 5 tumors compared to its expression in BPH.

“T/N & T/BPH” indicates whether the sequence is over-expressed in Tumors compared to both Normal and BPH tissues.

25 “Secreted” indicates whether the sequence is secreted or predicted to be secreted based on membrane-bound polysome experiments described herein.

“Prostate Spec Exp” indicates whether this sequence has prostate-specific expression based on the occurrence of this sequence in databases.

Listed below are the definitions of the abbreviations used in Tables 2-1 to 2-12:

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“Ave. BPH” indicates the mean expression in four non-cancerous benign prostate hyperplasia (BPH) tissues designated MPM000180, MPM000181, MPM000182 and MP000183.

“Ave. Tumor” refers to the mean expression of six stage T3NO tumors designated MPM000120, MPM000121, MPM000122, MPM000123, MPM000124, MPM000125.

5 “Ave. Fold” refers to the fold increase in expression in tumor tissues relative that of BPH tissues (calculated as Ave. Tumor/Ave. BPH).

“Fold (MPM120/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000120 over that observed in BPH tissue (calculated as expression score in MPM000120/Ave. BPH).

10 “Fold (MPM121/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000121 over that observed in BPH tissue (calculated as expression score in MPM000121/Ave. BPH).

“Fold (MPM122/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000122 over that observed in BPH tissue (calculated as expression score in MPM000122/Ave. BPH).

15 “Fold (MPM123/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000123 over that observed in BPH tissue (calculated as expression score in MPM000123/Ave. BPH).

20 “Fold (MPM124/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000124 over that observed in BPH tissue (calculated as expression score in MPM000124/Ave. BPH).

“Fold (MPM125/Ave. BPH)” refers to the fold increase in expression in prostate tumor MPM000125 over that observed in BPH tissue (calculated as expression score in MPM000125/Ave. BPH).

25 “Ave. Good” indicates the mean expression of five cancerous prostate tumors from five patients that were disease free for at least five years or more following surgery. These were all stage T2NO tumors designated as MPM000027, MPM000028, MPM000029, MPM000030 and MPM000035.

FOI b7E b7F b7G b7H b7I b7J b7K b7L b7M b7N b7O b7P b7Q b7R b7S b7T b7U b7V b7W b7X b7Y b7Z

“Ave. Poor” refers to the mean expression of four prostate tumor tissues from four patients whose disease recurred following surgery within a period of less than 5 years. These were two stage T2NO and 2 stage T3NO tumors. These were designated as MPM000031, MPM000032, MPM000033 and MPM000034.

5 “Fold (Ave.Poor/Ave.Good)” refers to the fold increase in mean expression of tumor tissues from patients with poor clinical outcome relative to the mean expression of tumor tissues from patients with good clinical outcome.

“Fold (MPM000031/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000031 over that observed as the mean of the five tumor samples from patients with a  
10 good clinical outcome (calculated as expression score in MPM000031/Ave.Good).

“Fold (MPM000032/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000032 over that observed as the mean of the five tumor samples from patients with a good clinical outcome (calculated as expression score in MPM000032/Ave.Good).

15 “Fold (MPM000033/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000033 over that observed as the mean of the five tumor samples from patients with a good clinical outcome (calculated as expression score in MPM000033/Ave.Good).

“Fold (MPM000034/Ave. Good)” refers to the fold increase in expression in prostate tumor MPM000034 over that observed as the mean of the five tumor samples from patients with a good clinical outcome (calculated as expression score in MPM000034/Ave.Good).

20 “Fold (Ave.Good/Ave.Poor)” refers to the fold increase in mean expression of tumor tissues from patients with good clinical outcome relative to the mean expression of tumor tissues from patients with poor clinical outcome.

“Fold (MPM000027/Ave. Poor)” refers to the fold increase in expression in prostate tumor MPM000027 over that observed as the mean of the four tumor samples from patients with a  
25 poor clinical outcome (calculated as expression score in MPM000027/Ave.Poor).

“Fold (MPM000028/Ave. Poor)” refers to the fold increase in expression in prostate tumor MPM000028 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000028/Ave.Poor).

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“Fold (MPM000029/Ave. Poor)” refers to the fold increase in expression in prostate tumor MPM000029 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000029/Ave.Poor).

5 “Fold (MPM000030/Ave. Poor)” refers to the fold increase in expression in prostate tumor MPM000030 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000030/Ave.Poor).

“Fold (MPM000035/Ave. Poor)” refers to the fold increase in expression in prostate tumor MPM000035 over that observed as the mean of the four tumor samples from patients with a poor clinical outcome (calculated as expression score in MPM000035/Ave.Poor).

10 “Ave. Cancer Cell Line Values” refers to the mean expression of three prostate cancer cell lines, designated MPM000002 (LNCaP), MPM000271 (PC3) and MPM000272 (DU145).

MPM1 refers to the normal prostate epithelial cell strain (PrEC), designated MPM000001.

15 “Fold (Ave.Cell line/MPM1)” refers to the fold increase in mean expression of the three prostate cancer cell line relative to the expression in the normal prostate cell strain MPM000001 (PrEC).

“Fold (MPM0000002/MPM000001)” refers to the fold increase in expression in prostate cancer cell line MPM0000002 (LNCaP) over that observed in MPM000001 (PrEC) the normal cell strain (calculated as expression score in MPM0000002/MPM000001).

20 “Fold (MPM0000271/MPM000001)” refers to the fold increase in expression in prostate cancer cell line MPM0000271 (PC3) over that observed in MPM000001 (PrEC) the normal cell strain (calculated as expression score in MPM0000271/MPM000001).

25 “Fold (MPM0000272/MPM000001)” refers to the fold increase in expression in prostate cancer cell line MPM0000272 (DU145) over that observed in MPM000001 (PrEC) the normal cell strain (calculated as expression score in MPM0000272/MPM000001).

The description of the fields for Tables 3-1, 3-3, 3-5, 4-1 and 6 is listed below:

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“Sequence #” or “Sequence ID” corresponds to the SEQ ID NO. assigned for each nucleotide sequence listed.

“Accession #” or “Accession” or “Acc No” corresponds to the accession number assigned to the nucleotide sequence in the relevant database.

5 “Database” or “Database hit” refers to the relevant database where the nucleotide sequence may be found according to its accession number. Those databases which are public include GenBank, dbEST (a division of GenBank), and NUCPATENT (a GENESEQ database, available through Derwent). For examples, see <http://www.ncbi.nlm.nih.gov/Entrez/nucleotide.html> for GenBank and [www.derwent.com](http://www.derwent.com) for GENESEQ. “GI number” is the GI identification number  
10 assigned to the marker in the GenBank database (see *supra*). Nucleic acid sequences of markers from Tables 3-1 and 4-1 which are from non-public databases (*e.g.*, PREPATNUC) are given in Tables 3-2 and 4-2, respectively. All referenced database sequences are expressly incorporated herein by reference.

The description of the fields for Tables 5-1 and 5-2 is listed below:

15 “Order” and “Clone” correspond to assigned reference numbers for each nucleotide sequence listed.

“GenBank Accession Number” corresponds to the accession number assigned to the nucleotide sequence in the GenBank database.

20 Other Embodiments

Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention described herein. Such equivalents are intended to be encompassed by the following claims.

25 All publications including journal references, patents and databases are expressly incorporated by reference.

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Table 1-1

Clone	Aver. of Tumors	Aver. of BPH	MPM-115 / Aver.	MPM-116 / Aver. BPH	MPM-117 / Aver.	MPM-118 / Aver. BPH	MPM-119 / Aver. BPH	Tumor Aver /
788180	25.18	0.50	102.19	5.44	15.38	90.33	40.12	50.69
308682	8.99	0.27	26.49	39.49	22.07	29.80	46.70	32.91
646037	24.42	0.75	53.07	14.65	28.67	17.92	49.22	32.70
281003	128.77	4.90	33.20	39.14	7.16	31.28	20.52	26.26
1034473	33.61	1.35	44.07	2.71	18.38	21.16	38.51	24.97
284701	33.05	1.53	17.19	22.80	11.69	43.48	13.22	21.68
66336	1.67	0.10	26.22	29.17	26.08	1.00	1.00	16.70
281039	14.05	0.90	1.80	7.16	1.52	66.03	1.32	15.57
26736	9.52	0.62	18.76	4.16	3.08	32.76	18.11	15.37
784168	53.04	3.83	4.81	12.77	16.92	15.79	18.91	13.84
486035	24.75	1.86	10.82	21.22	9.17	10.98	14.41	13.32
593185	28.06	2.29	3.25	8.22	9.64	26.71	13.34	12.23
222157	8.80	0.73	19.15	11.68	10.10	4.30	15.47	12.14
35058	15.59	1.44	4.36	13.99	6.63	22.14	6.94	10.81
730739	36.49	3.45	9.24	8.26	21.62	7.46	6.29	10.57
1636908	6.58	0.63	7.98	11.69	11.24	15.43	5.88	10.44
292515	16.22	1.56	8.49	16.42	6.85	7.64	12.51	10.38
450049	18.37	1.80	8.59	6.15	7.59	5.29	23.45	10.21
666334	1.64	0.16	9.09	11.54	10.25	7.37	12.48	10.14
32160	26.80	2.77	8.40	9.26	11.15	8.26	11.38	9.69
26519	36.05	3.76	10.15	14.36	8.76	6.89	7.79	9.59
42415	6.86	0.72	3.28	4.71	11.07	1.12	27.26	9.49
50772	18.10	1.91	4.58	9.38	7.33	20.62	5.42	9.47
1412481	8.41	0.90	0.84	0.56	0.97	43.41	0.78	9.31
197525	9.52	1.06	4.67	14.11	7.12	11.49	7.69	9.01
490178	24.55	2.73	5.26	4.27	26.85	3.26	5.29	8.99
461522	1.21	0.14	9.17	6.01	9.25	18.26	1.00	8.74
746152	9.35	1.07	15.24	8.42	15.81	3.05	1.00	8.70
712950	11.53	1.34	1.98	3.65	7.29	28.45	1.55	8.58
814053	14.66	1.75	7.99	1.27	6.56	19.08	7.03	8.38
1610448	135.55	16.44	12.94	8.87	5.99	4.91	8.53	8.25
825857	4.27	0.52	7.93	7.95	8.48	9.68	6.97	8.20
595297	3.07	0.38	10.77	9.58	5.96	9.36	5.19	8.17
595695	3.58	0.44	8.22	5.78	8.47	8.52	9.80	8.16
488964	7.77	0.96	26.20	6.06	2.31	3.91	1.95	8.08
259374	10.51	1.31	7.23	5.29	2.68	15.21	9.79	8.04
282089	11.18	1.41	1.99	11.92	1.50	23.33	0.88	7.92
823940	22.39	2.83	7.23	4.80	21.23	2.51	3.77	7.91
447715	14.83	1.88	7.03	18.09	5.79	5.60	3.00	7.90
1048810	20.15	2.59	8.33	12.64	4.86	8.53	4.52	7.78
46166	13.13	1.71	1.53	17.28	9.10	8.31	2.20	7.69
460279	0.87	0.12	11.78	9.75	7.52	6.64	2.24	7.59
687297	12.18	1.63	8.76	8.28	8.19	5.22	6.95	7.48
757392	0.86	0.12	8.05	9.45	7.56	8.53	3.46	7.41
731290	11.60	1.57	3.39	6.38	4.24	21.92	1.10	7.40
1556526	0.88	0.12	1.08	2.49	1.41	30.43	1.24	7.33
826109	0.75	0.10	9.78	6.45	6.11	10.44	3.60	7.27
825736	0.92	0.13	8.65	8.09	8.56	8.95	2.04	7.26
22161	20.24	2.80	5.54	5.05	9.71	9.20	6.71	7.24

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Table 1-1

283173	17.85	2.47	17.57	3.98	4.39	7.32	2.81	7.21
825822	14.07	1.97	5.87	8.14	6.53	10.54	4.71	7.16
280217	20.52	2.89	9.65	0.93	2.71	20.73	1.45	7.09
262053	10.75	1.52	5.67	9.07	8.71	8.34	3.60	7.08
66317	5.50	0.78	15.41	4.56	4.00	10.34	0.99	7.06
565235	35.83	5.15	3.19	8.34	3.79	17.38	2.08	6.96
1468260	4.53	0.65	13.06	1.36	7.45	4.03	8.89	6.96
826103	1.31	0.19	8.19	7.96	5.94	9.88	2.70	6.93
796366	34.94	5.05	10.57	5.34	12.35	3.13	3.18	6.92
877835	23.06	3.34	9.71	3.97	5.61	7.41	7.82	6.90
258300	18.15	2.65	4.31	7.13	13.32	1.26	8.27	6.86
814062	0.81	0.12	10.04	5.59	8.22	8.85	1.42	6.83
1034738	22.40	3.29	5.92	5.75	6.61	9.70	6.12	6.82
951313	6.84	1.01	2.78	4.19	15.48	7.44	3.86	6.75
253132	1.40	0.21	8.70	9.55	4.09	5.72	5.23	6.66
824510	1.38	0.21	8.56	9.50	7.92	5.67	1.59	6.65
826072	1.20	0.18	7.01	8.64	4.02	10.85	2.42	6.59
796754	0.66	0.10	6.20	5.19	5.58	9.09	6.47	6.50
251806	2.94	0.46	6.74	6.71	5.58	9.16	3.74	6.39
840306	2.49	0.39	2.46	5.82	8.43	9.48	5.73	6.38
815163	1.20	0.19	6.07	6.53	9.54	7.44	2.20	6.36
838285	1.34	0.21	4.71	7.31	6.15	8.05	5.54	6.35
565863	3.93	0.63	13.52	9.05	2.58	3.19	3.01	6.27
757435	365.78	58.35	3.90	3.17	17.54	3.19	3.55	6.27
67401	1.47	0.23	1.08	1.27	26.14	1.90	0.96	6.27
796239	26.07	4.18	1.88	2.16	10.01	7.23	9.94	6.24
321706	7.80	1.25	8.36	1.45	14.65	1.76	4.95	6.23
564801	12.35	1.99	5.89	2.75	17.66	3.44	1.34	6.21
950778	3.00	0.49	12.47	7.19	4.14	3.62	3.50	6.18
884606	33.46	5.43	6.01	3.92	16.90	2.25	1.74	6.16
454317	20.56	3.34	3.52	4.38	7.94	12.41	2.55	6.16
796646	6.21	1.01	5.13	3.61	5.34	6.22	10.48	6.16
840894	34.81	5.66	2.34	6.76	5.31	9.85	6.47	6.15
52933	3.59	0.58	5.96	6.27	4.93	6.70	6.87	6.14
594994	14.61	2.38	5.57	4.29	8.11	6.75	5.98	6.14
586780	1.92	0.31	11.12	7.73	4.39	3.68	3.68	6.12
868282	8.99	1.47	5.69	6.02	6.96	6.08	5.84	6.12
1535596	401.67	66.91	5.47	9.25	6.43	4.48	4.39	6.00
259973	1.66	0.28	6.61	6.24	5.06	6.62	5.42	5.99
839081	16.60	2.78	10.16	10.63	1.88	5.07	2.14	5.98
359661	26.24	4.39	4.04	9.90	3.64	7.90	4.38	5.97
509731	39.41	6.63	4.92	3.91	8.19	7.51	5.20	5.95
770066	11.43	1.93	1.49	2.31	5.43	18.27	2.17	5.94
151055	27.32	4.62	5.93	10.61	2.93	4.74	5.38	5.92
842927	4.24	0.72	2.96	5.54	10.03	6.26	4.59	5.88
824126	0.59	0.10	8.58	7.60	6.12	6.06	1.00	5.87
814662	1.12	0.19	5.53	5.17	7.24	9.88	1.37	5.84
1056172	10.33	1.77	6.48	4.11	1.30	15.30	1.99	5.84
840944	79.86	13.69	11.87	1.67	12.92	1.88	0.84	5.83
811582	10.13	1.75	8.01	4.53	6.69	4.59	5.11	5.78
1637282	4.01	0.70	2.86	2.47	10.87	9.32	3.03	5.71

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Table 1-1

838807	1.90	0.33	6.10	5.85	4.20	7.62	4.77	5.71
77915	14.99	2.63	3.34	8.82	3.66	2.66	10.02	5.70
252314	0.69	0.12	8.50	5.50	6.04	3.55	4.72	5.66
814235	12.37	2.19	6.17	6.36	5.75	7.43	2.52	5.65
461476	0.78	0.14	7.32	7.96	5.15	5.06	2.71	5.64
754358	12.77	2.26	4.29	5.26	8.83	2.50	7.34	5.64
53022	1.34	0.24	3.38	6.17	9.26	3.91	5.41	5.63
859228	85.06	15.20	5.32	4.79	6.57	7.30	4.01	5.60
290370	0.62	0.11	4.96	3.44	7.59	8.28	3.41	5.54
81331	2.84	0.52	1.67	4.49	1.34	18.34	1.80	5.53
260116	0.88	0.16	6.00	5.67	4.91	5.69	5.33	5.52
416374	4.49	0.81	3.17	8.84	3.61	10.29	1.67	5.52
840606	15.85	2.88	3.74	4.47	5.11	9.38	4.79	5.50
51773	11.48	2.09	6.89	4.08	3.70	8.77	4.03	5.50
240694	4.53	0.83	5.08	8.53	3.38	3.73	6.64	5.47
1605407	9.00	1.65	4.85	3.69	10.03	6.25	2.42	5.45
139771	7.72	1.42	13.10	8.46	1.72	1.70	2.24	5.44
1630990	20.64	3.80	8.87	4.51	3.52	9.31	0.98	5.44
1390584	6.54	1.21	3.13	4.93	5.15	12.83	0.99	5.41
186918	3.04	0.56	2.90	5.49	4.54	11.24	2.73	5.38
462097	8.32	1.55	7.30	2.88	1.25	9.95	5.50	5.38
32381	2.18	0.41	1.75	2.88	9.49	3.19	9.57	5.38
491764	0.81	0.15	6.00	5.07	5.46	5.33	4.98	5.37
1456160	41.61	7.76	2.23	3.67	7.39	11.23	2.29	5.36
159608	14.43	2.70	10.47	1.64	1.63	7.83	5.21	5.36
80050	8.15	1.52	6.41	4.16	11.93	0.95	3.31	5.35
610124	1.70	0.32	4.17	6.14	5.42	5.63	5.22	5.32
280763	0.53	0.10	3.60	5.23	5.40	6.52	5.64	5.28
283312	63.94	12.14	6.26	3.00	2.86	6.54	7.69	5.27
359781	7.82	1.49	3.10	9.11	3.52	6.46	4.12	5.26
297439	48.60	9.26	5.11	9.34	4.69	2.38	4.73	5.25
731410	0.53	0.10	5.74	4.50	5.23	5.26	5.48	5.24
772416	1.03	0.20	4.21	4.42	4.71	7.57	5.02	5.19
267419	0.97	0.19	3.98	9.05	3.92	5.50	3.38	5.16
897807	5.08	0.99	5.07	5.96	9.08	3.03	2.65	5.16
593658	1.08	0.22	4.01	5.03	5.25	5.65	5.29	5.04
511952	225.66	45.17	0.81	4.98	1.25	15.74	2.20	5.00
743452	7.90	1.59	7.90	7.46	2.03	4.53	2.98	4.98
878281	6.80	1.37	5.03	1.94	7.14	8.50	2.27	4.98
825297	0.96	0.19	4.48	3.92	7.31	4.87	4.28	4.97
731016	0.85	0.17	6.76	6.19	3.31	4.49	4.06	4.96
824723	14.11	2.84	3.64	3.92	5.23	8.15	3.87	4.96
824122	4.64	0.94	6.80	5.17	5.77	4.87	2.17	4.95
755239	17.93	3.62	5.25	3.08	3.43	8.49	4.50	4.95
784130	17.23	3.50	3.20	5.09	7.85	4.99	3.50	4.93
1585549	6.44	1.31	5.67	6.28	3.85	4.93	3.89	4.92
701677	16.03	3.27	7.12	3.55	3.14	8.18	2.54	4.91
814017	86.17	17.57	6.83	7.64	4.06	2.12	3.86	4.90
530185	8.46	1.74	2.68	5.31	6.79	3.57	6.04	4.88
773287	15.94	3.27	4.28	4.12	3.43	7.01	5.50	4.87
194723	5.22	1.07	8.66	7.32	2.79	2.88	2.66	4.86

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Table 1-1

788655	7.66	1.58	4.19	3.33	7.19	6.38	3.22	4.86
238661	2.74	0.56	9.41	7.84	2.13	2.69	2.21	4.86
773248	21.90	4.51	1.37	2.18	6.84	6.57	7.31	4.86
124252	6.06	1.25	11.29	6.83	1.86	2.10	2.21	4.85
814306	18.28	3.77	3.29	5.66	3.89	7.34	4.08	4.85
754280	23.83	4.92	9.79	5.07	5.33	1.97	2.08	4.85
1636108	3.58	0.74	5.59	4.80	5.19	4.56	4.09	4.85
461592	11.87	2.45	8.03	6.34	4.05	3.94	1.87	4.84
771053	16.14	3.34	3.85	4.29	4.79	3.56	7.67	4.83
703943	4.77	0.99	3.01	6.34	6.79	4.06	3.91	4.82
823691	7.42	1.54	2.71	4.70	4.41	8.34	3.93	4.82
289071	37.48	7.78	3.68	4.93	11.18	2.30	2.00	4.82
510576	132.22	27.52	5.44	2.70	2.95	8.26	4.68	4.81
264465	0.77	0.16	5.25	4.74	5.40	3.85	4.73	4.79
511428	24.31	5.08	5.64	3.21	4.36	5.17	5.56	4.79
488431	10.48	2.19	6.83	4.34	3.39	2.92	6.45	4.78
359701	5.21	1.09	4.50	5.09	3.54	3.24	7.52	4.78
1606837	23.76	4.98	6.95	2.67	3.34	5.80	5.10	4.77
823615	9.40	1.97	6.36	2.61	10.35	2.83	1.67	4.76
795265	4.58	0.97	1.65	3.44	3.71	12.61	2.30	4.74
813275	1.75	0.37	2.37	3.77	3.58	8.89	5.04	4.73
796351	2.34	0.50	5.27	6.47	3.71	4.50	3.66	4.72
787938	5.09	1.08	1.71	5.35	8.20	6.29	2.02	4.71
375682	31.04	6.60	3.43	4.82	7.07	3.67	4.53	4.70
869450	51.58	10.98	10.12	2.49	0.92	4.42	5.54	4.70
251435	0.73	0.16	4.68	5.34	5.04	4.18	4.15	4.68
824267	0.74	0.16	4.49	4.65	4.35	4.86	5.03	4.68
214006	4.67	1.00	9.34	7.13	2.17	3.26	1.38	4.66
251517	0.73	0.16	4.87	4.91	5.29	3.94	4.18	4.64
609052	0.87	0.19	5.08	4.85	3.84	4.06	5.34	4.63
1466631	1.21	0.26	3.47	5.67	4.78	4.73	4.50	4.63
1500000	6.11	1.32	8.25	6.21	3.19	2.69	2.81	4.63
1055201	30.25	6.55	4.44	2.37	4.47	9.42	2.38	4.62
840878	25.81	5.59	2.71	4.00	3.35	9.63	3.38	4.62
773204	21.34	4.63	2.70	3.84	5.75	1.24	9.53	4.61
290841	6.35	1.38	7.54	6.98	2.99	3.39	2.13	4.61
134969	6.81	1.49	10.24	6.19	2.21	2.17	2.11	4.58
824376	0.49	0.11	5.18	4.11	6.01	6.67	0.94	4.58
768643	41.57	9.10	2.42	4.02	11.03	2.91	2.45	4.57
26617	4.62	1.01	1.74	7.29	3.24	7.49	3.02	4.56
305538	11.44	2.54	6.22	5.46	2.58	2.41	5.84	4.50
811162	6.36	1.41	4.62	2.07	5.28	2.80	7.76	4.50
1637343	5.03	1.12	3.26	4.54	4.14	6.66	3.91	4.50
197779	8.61	1.91	10.37	7.03	1.68	1.51	1.91	4.50
815549	2.30	0.51	6.84	5.83	3.95	4.46	1.38	4.49
51700	3.66	0.82	4.47	4.07	4.99	3.08	5.73	4.47
757206	5.25	1.18	3.96	4.49	6.00	3.91	3.98	4.47
838761	2.59	0.58	6.93	6.35	2.56	3.70	2.80	4.47
343987	11.55	2.59	2.47	4.92	6.23	2.51	6.15	4.46
767406	0.44	0.10	5.11	3.93	4.22	4.46	4.52	4.45
79032	37.58	8.53	2.88	8.31	5.01	3.70	2.12	4.41

Table 1-1

815036	1.62	0.37	5.86	3.71	4.71	2.08	4.40
823895	1.57	0.36	4.08	4.25	4.38	4.45	4.40
201282	6.42	1.46	1.85	6.04	4.99	6.43	4.39
773208	26.40	6.05	2.45	3.37	5.47	1.22	4.37
121436	6.37	1.46	7.91	6.01	2.52	3.24	4.36
238821	6.54	1.50	5.59	1.57	4.76	0.92	4.35
814798	32.86	7.58	3.15	4.62	2.68	9.26	4.34
196650	10.93	2.52	4.17	6.60	2.20	6.71	4.33
971367	35.22	8.15	4.78	2.95	2.51	8.35	4.32
841220	1.46	0.34	3.52	5.00	4.19	4.54	4.32
200599	13.42	3.11	5.88	2.44	8.89	1.51	4.32
487733	15.01	3.48	3.75	5.14	4.04	6.05	4.32
564537	1.79	0.42	2.77	5.08	5.29	4.04	4.31
50606	14.94	3.47	5.20	2.99	5.04	3.92	4.31
253314	1.52	0.35	7.93	5.83	2.29	2.55	4.30
417908	12.10	2.82	8.40	4.93	3.98	1.81	4.29
29063	3.34	0.78	2.94	6.06	4.11	3.85	4.29
773345	1.21	0.28	3.42	4.56	2.89	8.45	4.29
1592006	5.30	1.24	4.98	3.66	4.06	4.48	4.28
461499	2.26	0.53	2.94	3.53	6.30	7.11	4.27
815800	1.22	0.29	5.36	6.04	5.43	3.31	4.25
436769	168.72	39.68	3.44	3.03	2.92	5.33	4.25
427838	4.05	0.95	7.99	6.36	2.29	2.32	4.25
50188	10.75	2.53	4.92	4.45	4.01	3.41	4.25
1519515	0.85	0.20	3.89	3.77	5.31	3.37	4.25
138444	4.04	0.95	3.84	7.52	3.07	4.21	4.24
1631849	25.01	5.91	4.16	5.55	3.42	4.66	4.24
613237	1.07	0.25	3.02	4.22	3.83	5.08	4.22
358850	21.29	5.06	7.24	3.98	3.18	2.13	4.21
290378	17.10	4.07	3.83	3.50	3.92	3.90	4.20
898109	6.77	1.62	4.54	3.37	5.89	5.18	4.19
82734	7.21	1.73	3.01	4.42	4.26	6.62	4.18
450307	9.39	2.25	7.70	6.02	3.75	1.27	4.17
593929	17.74	4.26	6.37	2.52	9.06	1.63	4.17
587415	12.98	3.12	7.46	3.53	7.08	1.19	4.16
842882	2.20	0.53	3.81	5.06	5.56	2.68	4.16
896914	18.03	4.35	5.29	7.59	0.53	6.00	4.14
1607765	3.96	0.96	4.88	3.54	3.13	5.17	4.14
824329	1.94	0.47	4.04	4.22	5.97	3.83	4.13
1558411	8.20	1.99	0.59	1.24	9.68	5.69	4.11
453599	4.23	1.03	3.89	3.56	3.50	6.56	4.11
486538	7.64	1.86	3.08	5.14	3.85	5.78	4.10
712216	0.50	0.12	5.35	4.81	4.78	4.53	4.10
753162	2.81	0.69	2.94	3.35	2.20	9.53	4.10
1637296	25.52	6.23	4.17	2.86	2.82	6.06	4.09
898242	10.34	2.53	2.92	4.71	4.80	5.15	4.09
771048	10.54	2.58	5.50	3.59	3.73	3.20	4.08
951125	18.86	4.63	3.30	7.80	2.31	3.51	4.07
611150	7.99	1.96	4.60	2.92	4.15	5.04	4.07
842925	4.61	1.13	3.78	3.80	4.94	4.96	4.07
824843	4.03	0.99	5.28	3.89	3.11	6.61	4.06

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Table 1-1

878544	19.20	4.73	8.54	2.29	4.85	2.59	2.02	4.06
781366	12.06	2.98	4.50	3.42	1.61	2.86	7.87	4.05
79000	6.24	1.54	2.16	5.95	3.81	5.31	3.04	4.05
24208	7.49	1.85	3.19	3.67	3.57	4.54	5.28	4.05
729953	4.95	1.23	3.26	4.43	3.91	6.32	2.25	4.04
34134	2.73	0.68	6.48	3.68	4.71	3.19	2.08	4.03
745283	7.94	1.97	4.03	3.25	3.72	4.68	4.44	4.02
1602619	135.32	33.71	4.29	3.43	3.41	4.71	4.23	4.02
1636868	5.07	1.27	5.31	4.50	3.81	4.48	1.96	4.01
726483	3.50	0.87	2.71	4.78	2.55	5.48	4.52	4.01
360403	28.16	7.03	9.60	1.99	5.91	1.37	1.17	4.01
757462	12.77	3.19	4.05	4.75	4.11	4.73	2.41	4.01
279482	8.66	2.16	3.13	2.00	10.92	1.42	2.54	4.00
811766	4.93	1.23	1.80	3.53	4.42	6.47	3.79	4.00
50764	0.43	0.11	4.10	3.54	3.73	5.17	3.48	4.00
626716	21.60	5.41	2.78	6.84	3.77	3.86	2.73	4.00
213682	13.07	3.27	0.79	3.49	2.68	9.05	3.96	3.99
685922	3.59	0.90	3.85	3.96	3.20	5.02	3.93	3.99
1631194	21.83	5.47	5.50	1.73	5.19	6.07	1.46	3.99
823578	0.56	0.14	4.98	3.43	4.18	3.36	3.93	3.98
32509	4.38	1.10	1.50	7.60	1.95	4.07	4.72	3.97
845352	13.36	3.37	4.44	3.86	3.95	2.54	5.05	3.97
191978	47.95	12.11	3.93	4.27	3.76	5.36	2.48	3.96
120707	19.60	4.95	2.32	3.87	3.65	8.32	1.62	3.96
75415	51.71	13.09	4.45	4.47	2.60	4.53	3.70	3.95
186768	9.43	2.39	2.81	1.73	11.34	2.18	1.69	3.95
80484	14.69	3.72	9.35	2.80	1.75	3.52	2.32	3.95
1475200	28.16	7.14	1.70	3.21	6.52	2.96	5.34	3.95
810510	27.71	7.03	3.76	3.64	2.68	4.64	5.00	3.94
897690	15.87	4.03	5.68	4.08	4.14	1.92	3.87	3.94
45327	8.18	2.08	2.60	3.75	4.04	5.11	4.18	3.94
299723	2.98	0.76	1.71	2.92	5.37	4.69	4.93	3.93
81578	12.77	3.25	5.02	3.62	6.26	2.36	2.37	3.93
197888	4.97	1.27	4.11	2.76	2.65	3.61	6.49	3.92
810571	4.37	1.11	2.29	5.21	2.51	6.03	3.57	3.92
768443	26.58	6.79	2.54	4.37	3.56	7.05	2.07	3.92
150314	5.29	1.35	2.49	4.79	3.04	6.51	2.76	3.92
196189	11.19	2.86	4.68	4.67	3.98	2.71	3.52	3.91
626990	7.39	1.89	2.81	2.77	3.38	7.85	2.73	3.91
127396	14.07	3.61	3.73	5.03	1.41	6.75	2.59	3.90
49710	3.21	0.82	2.93	3.48	4.65	4.08	4.34	3.90
262864	36.97	9.52	3.65	2.59	3.11	5.73	4.36	3.89
815737	3.64	0.94	3.91	4.25	3.43	5.08	2.74	3.88
256680	1.72	0.44	3.22	3.59	3.08	4.91	4.60	3.88
461509	0.62	0.16	4.43	4.30	3.23	5.77	1.64	3.87
809578	24.75	6.40	5.73	2.71	3.10	4.48	3.32	3.87
811121	1.07	0.28	2.85	4.21	4.20	4.46	3.62	3.87
547058	9.57	2.48	4.03	2.83	3.49	4.83	4.11	3.86
1035765	6.21	1.61	3.91	1.25	4.74	0.71	8.68	3.86
824739	2.63	0.68	7.31	4.22	2.34	3.52	1.89	3.86
815017	14.81	3.84	3.95	3.11	3.65	4.61	3.95	3.85

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Table 1-1

32684	24.32	6.32	4.79	1.68	2.94	5.24	4.60	3.85
178137	238.41	61.93	3.66	2.98	2.56	6.38	3.66	3.85
282283	0.84	0.22	3.28	3.36	3.61	4.89	4.09	3.85
725978	4.92	1.28	5.17	3.07	2.63	4.05	4.31	3.85
1631762	46.32	12.06	2.78	4.97	2.53	4.94	4.00	3.84
1553306	7.92	2.06	3.60	3.69	3.79	4.48	3.64	3.84
590145	4.37	1.14	3.78	3.14	3.77	5.80	2.69	3.84
815230	9.59	2.50	3.37	6.27	3.72	3.68	2.14	3.84
824237	74.89	19.54	3.14	3.18	3.55	5.72	3.57	3.83
361048	3.13	0.82	2.53	3.04	6.30	4.44	2.84	3.83
417867	13.52	3.54	2.81	3.70	3.15	4.96	4.47	3.82
878152	4.20	1.10	3.49	3.90	4.76	3.69	3.25	3.82
487499	4.41	1.16	2.68	3.09	8.83	3.10	1.37	3.82
712570	1.32	0.35	4.30	4.75	4.52	3.37	2.10	3.81
124824	30.85	8.13	3.79	2.43	2.17	3.37	7.23	3.80
626385	15.94	4.20	2.97	4.37	4.40	2.13	5.11	3.79
813271	0.96	0.25	3.16	4.24	3.70	4.31	3.56	3.79
561971	3.81	1.01	2.50	4.39	4.74	3.83	3.46	3.79
824358	0.96	0.25	4.80	3.84	3.71	5.67	0.90	3.79
741067	64.30	17.00	0.88	4.25	2.30	7.09	4.38	3.78
46411	3.07	0.81	2.37	2.25	5.61	3.01	5.66	3.78
594517	24.81	6.57	4.24	1.83	7.82	1.45	3.53	3.78
825668	2.26	0.60	3.80	3.91	4.97	3.99	2.20	3.77
362926	4.39	1.17	1.58	4.23	3.24	2.08	7.71	3.77
814018	0.98	0.26	3.30	3.43	6.07	5.33	0.71	3.77
745503	42.62	11.32	2.92	3.95	3.33	3.03	5.59	3.77
884531	7.71	2.05	2.78	3.56	3.60	6.93	1.94	3.76
210862	2.56	0.68	5.33	3.36	3.68	3.66	2.76	3.76
504544	12.31	3.28	2.35	4.09	2.54	7.86	1.95	3.76
838668	3.58	0.95	1.88	5.28	2.47	7.20	1.95	3.76
433253	7.29	1.95	2.88	2.93	2.56	6.57	3.78	3.74
461336	3.42	0.91	3.19	3.49	3.78	5.20	3.05	3.74
878525	11.10	2.97	4.03	4.61	3.75	2.79	3.49	3.74
383185	12.04	3.22	6.71	2.73	7.18	1.05	1.01	3.73
897733	5.86	1.58	4.19	4.06	4.13	4.55	1.60	3.71
1594019	24.27	6.55	3.80	3.42	3.34	3.87	4.10	3.71
506564	12.93	3.49	5.12	3.30	3.70	2.28	4.10	3.70
824917	1.74	0.47	4.19	3.64	3.11	2.99	4.52	3.69
84955	5.26	1.43	5.70	4.55	4.49	1.79	1.92	3.69
951080	2.43	0.66	6.73	4.60	2.27	2.30	2.53	3.69
30428	4.29	1.16	0.76	1.72	2.50	10.04	3.40	3.68
784093	6.44	1.75	3.21	4.16	4.32	2.79	3.93	3.68
135900	9.44	2.57	9.57	1.87	4.30	1.31	1.34	3.68
950688	52.65	14.32	4.34	2.16	2.56	4.14	5.19	3.68
878284	4.41	1.20	5.36	2.63	2.49	1.62	6.22	3.66
845363	29.59	8.08	4.04	3.09	2.09	5.22	3.87	3.66
358456	37.98	10.38	4.06	4.52	2.15	4.94	2.64	3.66
76252	11.64	3.19	5.18	3.55	3.64	3.20	2.69	3.65
36607	7.52	2.06	4.19	3.70	2.34	5.99	2.02	3.65
624271	5.74	1.58	3.97	2.76	2.08	7.77	1.62	3.64
743071	1.89	0.52	4.55	1.78	1.17	8.79	1.87	3.63

Table 1-1

1070015	3.26	0.90	1.10	3.25	0.84	5.24	7.71	3.63
203132	12.63	3.48	2.95	2.71	2.51	4.70	5.27	3.63
259953	1.46	0.40	3.59	3.86	2.56	4.66	3.46	3.63
814427	0.47	0.13	3.78	3.80	3.96	5.65	0.91	3.62
259462	3.69	1.02	1.07	1.43	1.22	13.31	1.06	3.62
810558	14.49	4.01	2.38	3.34	3.00	3.69	5.66	3.61
51151	3.26	0.90	3.04	4.60	2.81	5.13	2.49	3.61
272750	20.57	5.70	3.98	5.64	2.94	2.81	2.70	3.61
360885	40.29	11.17	5.08	2.71	5.71	1.52	3.03	3.61
208082	7.90	2.19	2.97	6.19	3.18	2.98	2.71	3.61
627428	24.22	6.72	1.13	1.36	6.42	4.29	4.83	3.61
845345	5.09	1.41	2.54	3.32	3.32	4.11	4.73	3.61
417801	17.18	4.77	2.94	2.40	2.51	5.34	4.83	3.60
361922	9.18	2.55	3.94	3.22	3.20	3.45	4.16	3.60
898206	1.79	0.50	2.31	3.99	3.53	4.38	3.77	3.60
431296	1.85	0.51	2.75	3.55	5.68	1.98	4.01	3.59
587595	559.22	155.61	0.86	2.83	3.47	7.37	3.44	3.59
1632161	39.75	11.08	4.86	3.58	2.47	2.92	4.10	3.59
121196	22.80	6.36	2.64	3.37	3.11	3.53	5.26	3.58
823819	11.96	3.34	4.72	4.29	2.21	3.08	3.60	3.58
1456721	12.82	3.58	3.28	4.85	3.29	3.04	3.47	3.58
1500324	6.77	1.89	2.74	6.90	3.33	2.21	2.73	3.58
86160	2.10	0.59	3.16	4.11	3.48	3.18	3.96	3.58
246620	16.85	4.71	3.66	3.89	3.47	5.00	1.89	3.58
52730	6.16	1.72	2.03	3.11	2.60	6.50	3.64	3.58
809657	4.72	1.32	5.12	2.96	2.52	2.52	4.76	3.58
253577	1.48	0.41	4.99	4.45	2.01	2.88	3.54	3.57
486459	6.24	1.75	2.96	3.80	3.21	5.49	2.40	3.57
23576	3.58	1.00	2.58	4.47	3.35	4.26	3.17	3.57
119403	1.22	0.34	3.95	4.15	2.67	3.43	3.62	3.57
324342	4.41	1.24	4.11	3.07	4.52	3.34	2.80	3.57
447518	10.98	3.08	1.93	4.33	4.07	2.68	4.81	3.56
811953	17.84	5.02	3.87	4.29	4.39	2.34	2.86	3.55
824124	1.03	0.29	4.84	3.47	4.24	4.08	1.11	3.55
837953	10.44	2.95	2.00	4.04	3.97	5.08	2.63	3.55
511521	33.96	9.58	2.43	4.75	3.58	3.11	3.86	3.54
1493252	9.89	2.79	3.88	4.49	1.98	5.20	2.16	3.54
626640	8.33	2.35	2.29	3.09	5.39	3.53	3.42	3.54
22731	4.46	1.26	3.38	2.26	3.14	6.00	2.92	3.54
84022	6.97	1.97	5.71	3.40	2.86	3.42	2.30	3.54
841302	7.41	2.09	2.18	2.19	10.28	1.46	1.58	3.54
150262	13.66	3.87	3.31	4.40	3.92	2.96	3.05	3.53
950461	38.86	11.02	0.81	1.10	5.41	4.59	5.73	3.53
251019	45.62	12.95	2.89	2.88	6.72	1.14	4.00	3.52
67654	15.79	4.50	1.22	3.32	2.33	6.57	4.11	3.51
592403	0.46	0.13	0.83	2.74	2.70	8.19	3.04	3.50
755750	5.88	1.68	3.23	1.83	2.12	7.95	2.36	3.50
1420790	13.40	3.84	2.46	3.91	3.17	3.47	4.47	3.49
843352	28.44	8.17	2.97	3.18	2.69	3.78	4.80	3.48
1604342	1.97	0.57	1.56	2.15	1.34	9.00	3.33	3.48
258167	17.24	4.96	3.26	5.42	3.43	2.37	2.90	3.48

Table 1-1

308466	9.26	2.67	4.61	4.96	3.31	1.52	2.95	3.47
272576	6.22	1.80	1.34	3.85	4.11	4.71	3.25	3.45
108265	7.24	2.10	4.59	3.00	3.05	3.84	2.76	3.45
842784	326.54	94.88	0.85	3.11	1.95	7.01	4.30	3.44
1467207	3.68	1.07	2.33	4.23	4.08	2.71	3.86	3.44
784225	10.62	3.09	2.36	4.44	3.93	2.57	3.89	3.44
430179	51.95	15.13	2.52	2.04	9.04	1.80	1.78	3.44
796513	17.83	5.20	4.20	3.32	2.84	5.24	1.56	3.43
83363	5.08	1.48	3.97	3.58	1.64	3.63	4.33	3.43
489109	7.44	2.17	2.33	3.11	5.81	2.19	3.71	3.43
812977	7.62	2.22	2.38	2.15	6.48	4.79	1.35	3.43
1492238	13.96	4.08	4.19	3.72	2.61	4.20	2.41	3.43
740914	7.20	2.11	5.02	1.70	6.97	1.58	1.84	3.42
1475797	85.21	24.92	1.93	2.41	2.93	7.69	2.14	3.42
897042	4.95	1.45	6.12	3.62	2.70	3.57	1.07	3.42
249705	62.65	18.34	2.89	3.73	2.52	4.92	3.02	3.42
1476065	6.33	1.86	2.32	4.22	1.08	8.04	1.42	3.41
251731	0.82	0.24	2.88	3.28	3.37	3.75	3.78	3.41
838366	11.15	3.27	2.46	3.30	3.45	3.28	4.57	3.41
855799	9.00	2.64	2.70	3.06	2.67	2.66	5.96	3.41
701112	8.70	2.55	2.26	4.01	3.63	4.37	2.78	3.41
26406	6.56	1.92	2.41	3.58	3.68	3.80	3.58	3.41
727251	34.32	10.07	2.95	3.27	4.52	4.01	2.30	3.41
252453	20.12	5.91	2.32	4.20	2.91	5.06	2.54	3.41
1435185	2.56	0.75	5.55	2.80	3.10	3.49	2.08	3.40
741474	4.93	1.45	2.81	2.16	3.51	5.40	3.13	3.40
289891	7.82	2.30	3.60	2.40	7.51	1.93	1.56	3.40
796774	0.44	0.13	3.55	2.86	3.04	3.54	4.02	3.40
290642	7.76	2.28	4.70	3.05	2.60	3.37	3.27	3.40
149013	7.82	2.30	2.27	1.81	4.99	1.02	6.89	3.40
745296	29.18	8.59	7.43	1.72	1.39	4.51	1.94	3.40
950603	3.53	1.04	1.95	2.17	2.24	8.88	1.70	3.39
878403	7.20	2.13	3.07	4.92	1.88	5.02	2.03	3.38
950430	7.48	2.22	4.11	4.50	2.71	2.81	2.76	3.38
39821	5.84	1.73	2.98	3.80	3.61	3.36	3.14	3.38
843139	39.96	11.84	4.71	1.39	4.05	2.96	3.77	3.38
137189	5.26	1.56	2.28	4.02	3.12	4.62	2.80	3.37
296529	9.83	2.92	3.71	4.18	2.72	2.15	4.08	3.37
544639	2.82	0.84	4.23	3.65	3.42	1.95	3.59	3.37
841140	2.47	0.73	4.27	4.30	2.28	3.23	2.75	3.36
49728	1.27	0.38	4.06	3.75	2.82	2.96	3.23	3.36
1638852	1.21	0.36	3.84	4.80	3.21	2.46	2.52	3.36
51011	4.64	1.38	3.25	1.40	2.40	2.89	6.87	3.36
753092	7.06	2.10	2.28	4.55	3.07	4.01	2.88	3.36
898210	8.13	2.42	2.34	3.18	3.05	4.51	3.70	3.36
490753	5.35	1.60	2.63	3.40	2.73	6.39	1.60	3.35
855624	17.75	5.31	1.02	1.19	0.83	1.13	12.53	3.34
768395	14.29	4.28	4.43	3.97	3.60	2.60	2.09	3.34
212165	41.96	12.58	5.13	3.22	4.38	1.81	2.15	3.34
377246	12.60	3.78	2.94	2.21	9.10	0.91	1.52	3.34
809876	27.74	8.32	4.70	3.46	1.68	2.47	4.37	3.34

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Table 1-1

34869	2.74	0.85	1.85	2.96	1.76	7.56	1.87	3.20
840590	21.70	6.78	2.44	1.18	2.39	8.32	1.68	3.20
377672	2.59	0.81	0.93	0.98	0.68	12.46	0.96	3.20
511632	7.85	2.46	2.42	2.96	2.15	4.52	3.94	3.20
531028	21.14	6.62	3.62	3.65	3.05	2.41	3.26	3.20
321386	2.45	0.77	3.26	2.66	2.50	4.45	3.11	3.20
754221	6.80	2.13	2.49	3.95	5.19	2.42	1.93	3.20
433573	10.67	3.34	3.00	3.46	3.80	2.33	3.38	3.19
489823	33.49	10.49	2.75	4.23	1.58	5.36	2.05	3.19
248454	3.70	1.16	7.24	2.69	2.10	2.69	1.24	3.19
298155	2.85	0.89	2.52	4.31	2.59	3.88	2.66	3.19
530814	46.55	14.60	0.83	4.74	4.23	4.56	1.60	3.19
294259	4.21	1.32	3.87	2.34	3.12	1.09	5.52	3.19
726488	10.10	3.17	3.31	3.38	3.27	3.50	2.45	3.18
511459	37.04	11.64	2.30	3.42	4.76	3.38	2.06	3.18
503468	51.40	16.15	3.74	2.80	1.75	4.34	3.28	3.18
756600	47.06	14.79	3.37	1.74	1.79	4.21	4.80	3.18
760344	5.89	1.85	3.62	4.43	2.41	1.42	4.03	3.18
753252	7.78	2.45	2.52	2.78	2.96	4.05	3.59	3.18
26230	5.08	1.60	1.18	3.71	4.40	3.50	3.09	3.18
37980	0.84	0.27	1.41	2.73	1.73	8.06	1.95	3.18
156386	2.14	0.67	3.02	3.99	3.91	2.87	2.09	3.18
969844	9.12	2.88	5.15	2.28	2.19	3.92	2.33	3.17
855723	6.73	2.12	2.86	3.79	2.80	3.00	3.38	3.17
1240220	7.60	2.40	0.79	2.71	6.02	4.99	1.31	3.17
451769	5.25	1.66	3.67	2.29	2.52	5.57	1.78	3.16
810027	0.44	0.14	3.75	3.05	2.90	3.82	2.31	3.16
731272	5.02	1.59	2.45	2.89	3.95	4.89	1.62	3.16
129024	4.30	1.36	5.53	0.58	1.77	1.86	6.04	3.16
795907	5.39	1.71	1.43	1.64	3.37	0.61	8.72	3.15
731257	4.45	1.41	1.78	2.17	3.22	7.14	1.45	3.15
703707	4.12	1.31	2.68	2.65	3.51	3.30	3.63	3.15
811603	19.62	6.22	3.87	2.99	2.25	3.41	3.24	3.15
884346	5.38	1.71	2.20	4.78	3.45	3.15	2.15	3.15
201628	7.51	2.39	4.15	2.46	1.74	5.00	2.35	3.14
840821	17.59	5.60	3.31	3.10	3.72	2.88	2.71	3.14
344432	15.48	4.93	3.94	2.68	2.53	2.44	4.11	3.14
590853	0.66	0.21	2.61	2.78	3.43	3.40	3.47	3.14
767298	19.37	6.18	2.43	3.33	2.32	4.12	3.48	3.14
36387	3.19	1.02	2.66	3.88	4.50	1.19	3.46	3.14
302955	10.63	3.39	1.90	5.11	2.20	4.12	2.36	3.14
796885	9.64	3.08	4.15	1.95	2.26	4.54	2.77	3.13
725489	26.71	8.54	3.93	3.59	2.81	3.60	1.72	3.13
121489	34.70	11.09	3.79	3.88	3.08	2.54	2.35	3.13
263894	0.46	0.15	3.70	3.08	2.13	4.71	2.03	3.13
782383	1.32	0.42	2.40	2.83	2.35	5.64	2.42	3.13
815563	4.86	1.55	3.37	3.78	2.43	4.15	1.90	3.13
245547	5.86	1.88	1.15	5.91	3.40	3.50	1.66	3.12
856575	2.75	0.88	2.42	1.67	5.16	3.07	3.31	3.12
251753	2.29	0.74	2.40	2.73	2.75	5.27	2.45	3.12
356992	21.95	7.04	4.19	2.74	2.51	3.63	2.54	3.12

Table 1-1

502463	5.77	1.85	2.78	3.60	3.10	2.63	3.49	3.12
1461528	3.95	1.27	3.05	2.21	5.36	2.64	2.33	3.12
244652	24.70	7.92	2.62	1.81	7.76	1.54	1.87	3.12
266106	20.68	6.63	2.76	3.21	6.30	1.40	1.93	3.12
1415981	4.13	1.32	3.58	3.02	4.59	2.33	2.07	3.12
66902	3.21	1.03	4.24	2.05	1.56	0.87	6.87	3.12
283919	7.56	2.43	7.31	3.63	1.47	2.02	1.15	3.11
813712	7.62	2.45	1.14	3.64	1.91	6.70	2.18	3.11
195903	6.95	2.24	2.45	4.56	3.51	2.97	2.05	3.11
345032	20.78	6.69	1.19	4.73	3.52	2.65	3.46	3.11
1635665	5.13	1.65	4.57	3.12	0.90	5.26	1.69	3.11
154749	1.76	0.57	3.34	3.27	3.77	2.57	2.58	3.11
287728	2.76	0.89	0.59	4.01	0.98	9.25	0.70	3.11
701409	1.54	0.50	4.21	2.63	3.95	2.39	2.34	3.10
627687	56.19	18.11	1.06	1.86	3.60	4.82	4.16	3.10
855244	15.78	5.09	6.04	0.82	7.22	0.56	0.88	3.10
293243	13.17	4.25	4.44	2.03	6.12	0.95	1.96	3.10
295206	3.16	1.02	5.72	3.11	1.43	2.48	2.76	3.10
744846	2.69	0.87	3.69	4.51	2.68	3.60	1.01	3.10
251645	0.50	0.16	3.12	3.21	3.74	3.30	2.12	3.10
357364	0.72	0.23	5.76	3.07	1.81	3.15	1.68	3.09
451707	7.59	2.46	2.46	1.83	6.35	1.34	3.48	3.09
250673	2.66	0.86	7.23	1.34	2.15	1.85	2.88	3.09
1031086	25.15	8.15	3.21	2.15	2.25	5.00	2.83	3.09
50892	7.95	2.58	3.62	2.53	3.85	2.69	2.71	3.08
52327	5.70	1.85	1.94	3.44	2.70	3.46	3.87	3.08
448930	7.53	2.45	2.47	2.25	2.41	3.62	4.66	3.08
713109	2.44	0.79	1.97	2.95	3.60	4.59	2.28	3.08
815794	14.69	4.77	5.65	1.93	1.67	1.95	4.18	3.08
789091	9.50	3.09	6.20	4.45	1.91	1.88	0.95	3.08
950836	34.79	11.31	2.78	1.53	8.20	0.92	1.95	3.08
213890	14.14	4.60	2.37	5.07	2.41	3.28	2.24	3.07
74223	5.42	1.76	3.29	3.47	3.41	2.68	2.52	3.07
41174	4.02	1.31	3.25	3.60	2.82	3.70	1.98	3.07
1635874	6.06	1.97	6.28	3.19	1.83	2.38	1.69	3.07
810284	2.27	0.74	5.17	2.15	2.18	2.13	3.71	3.07
845502	3.87	1.26	1.42	3.27	3.03	4.57	3.06	3.07
461489	0.92	0.30	3.19	3.40	2.48	2.98	3.28	3.07
361097	5.63	1.84	3.06	3.81	1.75	3.06	3.64	3.07
139113	4.32	1.41	2.39	3.80	2.88	5.14	1.10	3.06
813636	84.51	27.59	3.51	2.53	2.58	4.58	2.11	3.06
743804	5.09	1.66	3.74	2.59	2.21	3.39	3.38	3.06
486567	9.14	2.99	2.48	4.29	2.98	2.50	3.06	3.06
665127	5.48	1.79	3.90	3.70	2.31	2.65	2.73	3.06
136605	10.58	3.46	3.42	0.62	2.86	2.82	5.58	3.06
395625	14.45	4.73	2.38	3.22	3.22	3.25	3.22	3.06
287528	1.98	0.65	3.56	0.96	5.02	3.66	2.06	3.06
323474	1.25	0.41	5.34	3.25	2.05	2.36	2.27	3.06
884388	4.89	1.60	2.97	2.78	2.75	3.38	3.40	3.06
222527	2.88	0.94	1.68	4.03	3.69	4.09	1.79	3.05
260628	8.94	2.93	1.68	4.70	3.88	2.83	2.17	3.05

Table 1-1

471266	2.72	0.89	3.15	2.95	2.66	3.45	3.03	3.05
565062	1.38	0.45	1.72	3.15	3.97	2.87	3.53	3.05
701532	3.26	1.07	3.06	2.86	3.51	1.98	3.84	3.05
878127	3.53	1.16	2.07	3.35	4.53	3.32	1.96	3.05
878373	31.06	10.19	3.07	3.84	2.03	4.00	2.29	3.05
40075	3.13	1.03	2.09	3.44	2.70	5.00	2.00	3.05
884766	9.95	3.27	1.22	3.47	2.45	2.67	5.40	3.04
754192	3.30	1.09	4.21	2.70	2.65	3.45	2.21	3.04
299154	1.37	0.45	1.64	3.95	3.01	2.17	4.42	3.04
344589	53.28	17.55	1.28	4.11	3.84	2.63	3.31	3.04
897153	10.77	3.55	3.27	3.89	4.14	2.12	1.76	3.04
328613	0.46	0.15	2.60	3.52	3.31	2.33	3.42	3.03
884867	24.71	8.14	3.57	3.43	1.95	3.39	2.83	3.03
289288	5.44	1.79	3.47	2.18	3.94	1.96	3.62	3.03
788518	13.97	4.61	2.21	4.58	2.41	3.19	2.78	3.03
825842	6.00	1.98	1.78	2.66	4.19	1.45	5.08	3.03
133130	11.12	3.67	3.58	0.72	2.94	2.70	5.20	3.03
252864	1.20	0.40	2.46	3.75	2.39	3.50	3.03	3.03
813187	22.70	7.51	1.31	2.52	4.98	3.97	2.34	3.02
1635110	38.13	12.62	4.50	2.40	3.02	2.46	2.73	3.02
266747	3.05	1.01	3.26	3.57	2.70	0.99	4.59	3.02
490360	5.94	1.97	2.87	3.33	2.69	3.50	2.72	3.02
951216	2.02	0.67	3.88	2.20	2.08	4.19	2.75	3.02
322914	9.34	3.10	4.67	3.02	2.07	1.93	3.39	3.02
845609	15.29	5.07	3.85	3.88	2.84	3.05	1.46	3.02
1467108	4.29	1.42	1.21	3.61	4.50	3.23	2.53	3.02
415978	24.58	8.16	2.76	1.42	3.19	4.93	2.76	3.01
645368	8.48	2.82	2.47	3.08	3.32	2.42	3.76	3.01
854899	18.74	6.24	3.77	2.48	2.61	2.49	3.67	3.00
80764	26.16	8.72	2.38	2.68	2.24	3.93	3.77	3.00
1501998	2.03	0.68	3.20	3.50	2.70	3.57	2.05	3.00
590298	10.43	3.47	3.90	3.96	3.21	2.04	1.90	3.00
594693	7.33	2.44	3.84	2.11	7.17	1.01	0.88	3.00
856115	1.30	0.43	9.13	1.80	2.06	0.91	1.10	3.00
364022	4.15	1.39	3.12	5.09	2.52	2.61	1.64	3.00
730412	1.25	0.42	2.86	2.00	3.95	3.63	2.55	3.00
843140	14.94	4.99	1.67	3.33	3.94	2.97	3.06	3.00
342211	1.92	0.64	2.75	3.24	2.28	4.81	1.90	3.00
742806	1.76	0.59	2.37	3.25	4.16	2.33	2.85	2.99
884480	11.68	3.91	3.07	2.74	1.85	4.27	3.01	2.99
1636707	19.22	6.44	2.58	3.23	2.07	3.98	3.07	2.99
712610	1.06	0.35	3.02	3.36	3.85	3.46	1.23	2.98
360232	2.20	0.74	1.98	3.91	3.63	3.66	1.72	2.98
74511	5.23	1.75	4.10	3.44	2.52	0.97	3.89	2.98
343167	15.62	5.24	3.15	4.46	2.96	2.05	2.27	2.98
39885	0.94	0.31	0.88	2.80	4.66	4.76	1.80	2.98
122183	7.61	2.56	2.66	4.22	2.01	2.53	3.46	2.98
38253	2.80	0.94	3.19	4.23	2.69	2.79	1.98	2.98
745103	8.87	2.98	2.03	3.44	3.39	2.05	3.96	2.97
155838	2.53	0.85	2.70	1.94	5.31	2.18	2.74	2.97
813149	6.11	2.06	5.57	3.70	2.01	2.38	1.21	2.97

Table 1-1

469685	4.95	1.67	3.25	3.34	2.23	3.52	2.51	2.97
824640	6.96	2.35	1.37	1.54	3.69	3.65	4.59	2.97
825833	1.95	0.66	3.29	2.75	4.19	2.65	1.97	2.97
25517	8.52	2.88	3.15	3.29	2.67	2.43	3.28	2.97
842767	2.15	0.73	2.59	3.85	3.19	2.67	2.53	2.96
148225	3.89	1.31	2.29	2.66	1.88	5.50	2.47	2.96
772304	113.14	38.24	3.78	2.19	2.18	2.83	3.83	2.96
246800	6.67	2.26	2.06	3.22	2.26	4.33	2.91	2.96
322192	7.97	2.69	1.72	3.28	5.02	1.74	3.02	2.96
755765	4.01	1.36	2.43	3.91	4.37	1.46	2.62	2.96
462468	3.24	1.10	3.23	3.74	3.40	1.72	2.69	2.96
701402	4.23	1.43	1.82	3.11	5.63	2.91	1.31	2.96
253253	1.73	0.59	4.71	4.49	1.70	2.17	1.68	2.95
211206	4.71	1.60	2.58	3.21	2.52	2.63	3.82	2.95
813825	0.52	0.18	3.85	3.04	1.69	4.84	1.32	2.95
898227	2.02	0.69	1.45	4.11	2.91	4.09	2.18	2.95
45578	5.05	1.72	4.61	2.16	2.26	3.42	2.27	2.94
1522799	1.23	0.42	2.25	3.40	2.72	3.47	2.86	2.94
593520	6.25	2.13	2.05	2.67	3.01	4.62	2.34	2.94
487773	29.51	10.06	4.78	2.56	4.05	1.34	1.95	2.93
502690	4.09	1.39	2.22	3.28	2.51	4.37	2.29	2.93
731104	0.65	0.22	3.42	2.35	3.12	2.70	3.07	2.93
796341	7.16	2.44	2.21	2.93	2.48	3.55	3.49	2.93
1492304	4.23	1.44	2.24	2.81	3.19	4.05	2.36	2.93
77805	15.55	5.31	2.32	4.51	2.41	2.27	3.13	2.93
415700	3.36	1.15	2.29	2.89	4.79	1.53	3.14	2.93
701496	2.28	0.78	2.43	2.22	5.16	3.20	1.62	2.93
233419	5.55	1.90	1.88	3.96	3.98	1.76	3.06	2.93
767994	4.29	1.47	2.76	1.52	8.75	0.69	0.92	2.93
254310	10.26	3.51	3.10	2.50	6.68	1.35	1.00	2.92
48033	0.51	0.18	2.77	3.62	3.02	2.44	2.76	2.92
811842	9.91	3.39	2.78	3.26	2.72	2.81	3.05	2.92
44975	8.91	3.05	2.47	4.15	2.22	2.69	3.08	2.92
243068	9.34	3.20	2.27	2.18	2.15	5.77	2.23	2.92
1635350	10.17	3.48	2.60	2.63	5.83	2.20	1.33	2.92
759948	4.05	1.39	2.12	1.92	1.94	7.00	1.59	2.91
35807	2.91	1.00	3.30	2.96	2.26	3.58	2.45	2.91
45515	3.88	1.33	1.58	3.77	5.25	1.91	2.04	2.91
1591622	49.35	16.97	2.27	3.52	1.93	4.64	2.17	2.91
460841	1.02	0.35	4.19	1.78	4.04	2.42	2.11	2.91
1411726	30.68	10.55	3.69	2.02	2.19	4.86	1.78	2.91
160485	5.17	1.78	3.02	1.25	1.91	2.64	5.72	2.91
742695	1.83	0.63	2.56	3.08	2.90	4.14	1.83	2.90
242706	5.15	1.78	3.05	3.96	1.69	3.81	1.99	2.90
868838	3.29	1.14	1.07	1.24	0.96	9.00	2.21	2.90
1420830	3.06	1.06	1.37	2.47	2.52	4.60	3.53	2.90
825771	12.13	4.19	2.16	5.30	2.82	2.12	2.09	2.90
826102	4.19	1.45	2.02	1.86	7.90	1.13	1.56	2.89
461488	0.55	0.19	3.29	3.33	2.51	2.75	2.59	2.89
49485	0.54	0.19	3.81	2.49	2.73	3.24	2.15	2.89
129725	17.94	6.22	2.93	1.99	4.17	3.16	2.17	2.89



Table 1-1

627273	1.58	0.55	1.88	3.85	2.31	3.67	2.73	2.88
143306	10.42	3.62	3.88	2.52	1.98	3.46	2.55	2.88
730313	3.95	1.37	2.62	2.27	3.50	2.08	3.93	2.88
825718	4.03	1.40	2.44	2.50	3.77	3.02	2.67	2.88
1591264	3.18	1.11	4.68	4.17	2.19	2.11	1.23	2.88
784016	33.80	11.75	2.08	4.19	3.69	2.77	1.66	2.88
41940	10.51	3.65	1.79	2.81	3.34	3.64	2.80	2.88
841501	5.94	2.07	3.74	4.22	2.48	2.62	1.31	2.88
853968	12.10	4.21	3.42	3.85	5.08	1.19	0.84	2.87
489663	2.11	0.73	3.88	2.51	1.67	3.15	3.17	2.87
669371	4.99	1.74	2.07	1.98	7.30	1.15	1.87	2.87
815760	2.31	0.81	3.18	2.00	4.13	3.96	1.09	2.87
125722	3.28	1.14	4.52	2.27	2.75	3.95	0.86	2.87
897625	2.58	0.90	1.23	2.12	4.08	3.14	3.79	2.87
768179	3.80	1.32	1.92	3.06	2.43	4.11	2.83	2.87
768469	4.17	1.45	2.78	1.73	2.41	3.64	3.79	2.87
898265	20.16	7.03	1.31	2.31	3.96	2.43	4.34	2.87
868119	10.00	3.49	2.81	3.31	3.66	1.82	2.73	2.87
897983	26.99	9.42	2.98	3.14	2.24	2.33	3.64	2.86
1416086	8.24	2.88	3.59	2.09	5.52	1.57	1.54	2.86
141972	18.88	6.60	3.58	3.00	3.07	1.99	2.68	2.86
144977	71.81	25.09	2.67	3.73	3.36	1.42	3.14	2.86
949940	12.52	4.38	4.69	2.75	1.41	3.20	2.25	2.86
898251	2.02	0.71	2.79	2.93	3.12	4.01	1.45	2.86
80500	140.81	49.33	0.91	2.65	1.64	5.24	3.85	2.86
823588	7.72	2.70	2.44	3.65	3.22	2.51	2.45	2.85
269300	10.64	3.73	1.47	2.55	4.46	4.07	1.71	2.85
823627	3.25	1.14	2.72	3.08	3.03	1.90	3.53	2.85
1589973	5.17	1.81	2.56	3.21	1.99	4.51	1.99	2.85
246541	10.77	3.78	2.76	3.03	2.41	3.92	2.14	2.85
784253	11.76	4.12	2.36	3.67	2.76	2.44	3.04	2.85
27072	0.29	0.10	2.61	2.23	3.44	2.93	3.04	2.85
754449	1.78	0.63	2.10	3.63	2.52	4.00	1.99	2.85
82905	1.21	0.43	3.27	1.88	1.90	3.49	3.70	2.85
743828	3.34	1.17	1.16	1.69	5.22	0.99	5.18	2.85
743851	8.22	2.89	3.40	2.79	2.54	3.77	1.72	2.84
1475746	12.48	4.39	3.24	2.13	2.29	3.86	2.70	2.84
283196	3.80	1.34	1.51	2.93	1.19	6.19	2.38	2.84
866276	1.94	0.68	1.99	3.31	2.96	2.62	3.33	2.84
144926	9.20	3.24	3.79	2.02	2.76	3.87	1.75	2.84
769926	9.93	3.51	6.19	1.95	2.54	2.39	1.09	2.83
730554	11.89	4.20	2.36	3.04	1.33	4.78	2.64	2.83
40017	8.29	2.94	2.97	3.32	1.84	3.86	2.12	2.82
897577	0.52	0.18	2.18	2.74	3.06	3.81	2.31	2.82
1492412	236.26	83.73	1.73	2.18	3.44	2.84	3.92	2.82
1336262	35.80	12.69	4.41	2.34	4.62	1.32	1.41	2.82
250678	4.24	1.51	3.14	3.84	3.52	1.72	1.86	2.82
810220	2.17	0.77	4.33	3.00	1.34	3.50	1.92	2.82
271076	4.31	1.53	2.34	3.42	3.53	2.75	2.04	2.82
111812	5.56	1.98	3.30	4.08	4.25	1.15	1.29	2.81
898096	4.06	1.45	3.41	2.02	3.72	1.08	3.83	2.81

Table 1-1

250869	123.92	44.10	8.11	2.05	1.68	0.76	1.46	2.81
840620	13.81	4.92	1.46	1.93	2.95	3.21	4.47	2.81
53165	0.89	0.32	3.53	3.16	2.83	2.33	2.16	2.80
784128	1.83	0.65	1.61	1.75	6.85	1.95	1.84	2.80
452668	4.95	1.77	2.13	1.80	2.80	5.84	1.44	2.80
811911	11.89	4.25	3.15	1.99	3.02	2.42	3.41	2.80
854122	4.20	1.50	5.92	3.38	2.72	0.79	1.18	2.80
491184	6.35	2.27	3.28	1.15	8.07	0.69	0.80	2.80
825356	1.18	0.42	2.48	2.51	4.19	3.57	1.22	2.79
214884	3.55	1.27	4.42	2.54	1.68	3.83	1.50	2.79
450711	1.29	0.46	2.21	3.64	2.22	4.08	1.82	2.79
1593502	2.25	0.81	1.62	3.22	2.57	2.01	4.54	2.79
825058	3.42	1.23	2.71	1.17	8.02	1.37	0.68	2.79
285226	25.74	9.23	7.63	1.20	2.23	1.77	1.12	2.79
191904	7.67	2.75	3.12	2.55	2.70	2.27	3.28	2.79
786609	4.81	1.73	0.70	0.71	2.56	9.16	0.80	2.78
204146	2.40	0.86	1.54	5.79	2.84	1.41	2.34	2.78
713286	0.89	0.32	3.32	2.65	3.34	3.52	1.08	2.78
416833	6.07	2.18	1.35	3.81	1.74	4.90	2.09	2.78
268211	3.43	1.23	2.33	1.79	1.77	1.26	6.74	2.78
782439	35.89	12.92	3.09	2.38	1.70	3.98	2.74	2.78
810741	72.43	26.10	3.64	2.64	2.20	3.00	2.38	2.78
431286	13.81	4.98	2.22	2.98	3.24	1.94	3.50	2.77
826335	2.24	0.81	2.09	2.46	3.66	3.16	2.49	2.77
796313	0.78	0.28	3.22	2.69	2.55	2.13	3.26	2.77
812989	2.18	0.79	2.58	2.17	3.23	3.95	1.93	2.77
258521	3.33	1.20	1.48	7.97	1.12	1.13	2.14	2.77
526945	1.14	0.41	3.17	1.74	2.47	3.11	3.36	2.77
197821	5.95	2.15	5.83	4.39	1.04	1.29	1.28	2.77
1631747	5.09	1.84	4.14	4.87	1.99	1.76	1.08	2.77
1475738	238.01	86.12	3.33	2.08	2.23	3.93	2.25	2.76
248261	1.51	0.55	4.72	1.35	0.99	1.14	5.61	2.76
841348	11.96	4.33	4.50	2.03	0.87	4.69	1.72	2.76
1031346	3.21	1.16	3.61	2.85	2.26	3.16	1.91	2.76
244154	4.94	1.79	2.49	2.18	3.84	2.06	3.22	2.76
245860	30.36	11.02	5.36	1.24	5.40	0.69	1.09	2.76
271472	11.80	4.28	2.07	3.57	2.66	2.40	3.07	2.76
753917	6.49	2.36	2.95	3.41	1.98	3.47	1.95	2.75
51749	3.65	1.33	2.28	1.01	1.83	2.34	6.28	2.75
296429	5.99	2.18	1.94	3.44	2.46	2.47	3.43	2.75
430318	10.87	3.96	1.77	2.79	3.60	1.97	3.59	2.74
283142	3.58	1.31	3.20	3.03	3.74	1.95	1.78	2.74
435341	1.73	0.63	3.20	2.13	2.58	3.61	2.19	2.74
278531	57.48	20.99	1.66	3.41	1.66	4.44	2.52	2.74
489722	4.03	1.47	2.33	2.25	3.98	3.06	2.07	2.74
814945	4.97	1.82	2.62	3.11	2.36	3.47	2.14	2.74
503741	3.64	1.33	1.17	3.06	1.97	5.66	1.82	2.74
1632141	2.15	0.79	2.34	3.20	3.06	2.96	2.13	2.74
428215	42.11	15.40	3.87	3.41	1.92	2.28	2.19	2.74
878316	5.34	1.95	2.19	2.60	1.52	4.16	3.20	2.73
1573087	2.41	0.88	1.63	2.09	4.06	4.16	1.72	2.73

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Table 1-1

841399	9.08	3.33	2.44	2.07	3.48	3.21	2.45	2.73
897730	41.12	15.07	3.07	1.82	2.32	2.54	3.88	2.73
866882	10.73	3.94	1.81	4.01	3.71	1.83	2.28	2.73
1160558	8.03	2.94	2.15	3.29	2.53	3.66	2.00	2.73
127928	3.67	1.35	1.79	3.28	2.89	2.15	3.51	2.73
897971	11.55	4.24	1.43	2.82	3.44	2.74	3.21	2.73
447568	9.00	3.31	3.49	1.70	1.86	4.48	2.08	2.72
811880	3.13	1.15	1.85	2.58	4.75	3.12	1.30	2.72
810725	3.27	1.20	1.92	2.23	1.63	5.97	1.85	2.72
197176	20.79	7.65	3.06	2.51	3.48	2.16	2.38	2.72
758347	2.75	1.01	1.61	3.59	3.19	2.80	2.41	2.72
43705	0.35	0.13	2.72	3.74	1.90	3.12	2.09	2.71
813280	4.14	1.53	1.72	2.58	2.29	3.06	3.91	2.71
195652	18.03	6.65	2.18	3.01	2.07	4.00	2.29	2.71
868308	65.99	24.35	3.48	1.83	1.37	4.88	2.00	2.71
429906	5.35	1.98	1.98	3.10	2.51	2.18	3.77	2.71
83011	32.97	12.18	2.39	2.09	2.06	3.35	3.64	2.71
838611	52.82	19.51	4.00	0.88	1.23	4.84	2.60	2.71
783697	3.19	1.18	2.47	3.13	3.04	2.62	2.26	2.70
268178	28.02	10.37	1.92	3.23	2.46	3.05	2.85	2.70
460487	24.08	8.92	0.68	0.85	5.68	0.08	6.21	2.70
418053	7.57	2.80	3.25	1.89	2.22	3.44	2.70	2.70
884894	41.65	15.44	3.11	2.60	1.96	3.14	2.68	2.70
824066	4.08	1.51	2.48	2.33	1.91	5.02	1.74	2.70
950450	1.77	0.66	1.96	2.45	3.15	3.54	2.39	2.70
50344	0.85	0.32	1.00	1.06	0.91	9.45	1.06	2.70
42076	5.72	2.12	2.14	3.48	2.38	2.44	3.04	2.69
68636	4.83	1.80	2.78	3.27	2.43	3.37	1.62	2.69
26185	1.15	0.43	1.89	2.57	3.38	3.81	1.78	2.69
278687	13.10	4.88	2.06	4.03	2.38	1.89	3.07	2.69
391984	4.56	1.70	3.22	3.44	1.67	2.03	3.06	2.68
279785	0.91	0.34	1.97	1.94	1.70	5.89	1.92	2.68
897199	14.78	5.51	3.48	2.55	2.61	3.07	1.71	2.68
263697	4.23	1.58	3.06	3.23	4.13	1.12	1.87	2.68
770983	7.24	2.70	1.30	5.12	2.60	2.36	2.03	2.68
505344	2.26	0.84	3.69	2.24	1.96	3.13	2.38	2.68
253865	1.68	0.63	5.25	3.14	1.49	1.55	1.93	2.67
752690	6.05	2.27	3.98	2.14	0.98	4.23	2.02	2.67
857681	54.39	20.36	3.42	2.88	1.57	3.42	2.07	2.67
1049033	3.07	1.15	2.50	3.09	3.57	3.21	0.99	2.67
743041	6.48	2.43	3.55	3.05	3.00	2.00	1.76	2.67
461761	8.65	3.24	2.63	1.55	4.32	3.11	1.72	2.67
51921	4.48	1.68	5.04	1.90	2.84	1.30	2.26	2.67
1471829	99.54	37.33	2.97	2.21	1.62	5.24	1.30	2.67
307882	7.09	2.66	3.13	1.77	2.17	4.14	2.12	2.67
743081	3.75	1.41	4.46	3.27	1.20	2.05	2.35	2.67
251452	3.12	1.17	1.29	2.18	2.99	5.63	1.24	2.67
795738	2.06	0.77	3.12	3.28	1.60	3.79	1.52	2.66
838478	2.51	0.94	4.43	1.79	2.84	1.08	3.16	2.66
361323	4.53	1.70	1.66	1.41	2.10	6.37	1.76	2.66
529861	5.75	2.16	2.44	2.09	3.05	3.43	2.29	2.66

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Table 1-1

486175	10.39	3.91	1.74	7.19	2.53	0.92	0.91	2.66
307029	56.38	21.22	3.05	1.98	1.59	4.58	2.09	2.66
243321	2.79	1.05	2.81	1.53	1.43	1.74	5.74	2.65
590398	12.27	4.63	4.11	2.22	2.03	3.29	1.58	2.65
1475028	249.73	94.34	2.17	1.81	1.81	4.31	3.14	2.65
595604	9.41	3.56	1.72	1.96	4.39	3.06	2.10	2.65
188151	3.25	1.23	1.76	5.51	1.64	2.21	2.09	2.64
859832	2.57	0.97	1.88	3.53	2.79	3.19	1.81	2.64
42313	1.33	0.51	3.37	2.77	2.16	3.35	1.55	2.64
282144	30.16	11.43	1.47	2.73	2.45	5.25	1.30	2.64
32887	3.04	1.16	1.78	3.54	3.59	2.10	2.17	2.64
137254	1.35	0.51	3.82	2.00	4.43	1.38	1.55	2.64
234036	4.77	1.81	1.87	3.76	2.13	3.14	2.28	2.64
206785	6.05	2.30	4.91	3.70	1.64	1.42	1.50	2.63
244202	9.25	3.51	1.51	2.29	3.36	1.92	4.09	2.63
827144	2.52	0.96	1.88	3.18	2.21	1.64	4.24	2.63
838504	41.97	15.95	1.67	3.37	2.82	3.53	1.77	2.63
376764	2.58	0.98	1.35	2.16	3.58	3.03	3.03	2.63
744933	2.15	0.82	0.98	1.12	0.87	8.87	1.30	2.63
161456	13.35	5.08	0.92	0.15	10.09	0.13	1.83	2.63
564846	1.90	0.72	3.47	1.34	2.53	2.17	3.62	2.63
815072	3.49	1.33	5.03	2.36	1.34	2.07	2.32	2.62
1599489	5.51	2.10	3.32	3.51	1.94	2.95	1.40	2.62
80292	2.18	0.83	2.30	3.64	1.47	3.07	2.62	2.62
262865	30.48	11.64	3.50	2.06	4.94	0.99	1.61	2.62
590390	6.42	2.45	4.07	2.94	1.83	3.34	0.92	2.62
610011	34.63	13.23	3.40	2.31	2.21	1.95	3.23	2.62
855487	8.56	3.27	2.21	3.52	3.16	1.26	2.94	2.62
503097	7.27	2.78	1.87	1.80	7.01	1.54	0.86	2.62
825719	0.76	0.29	3.01	3.07	3.22	2.78	0.99	2.62
282720	8.31	3.18	3.44	1.29	2.89	2.24	3.20	2.61
767798	5.70	2.18	2.43	1.90	2.16	3.46	3.13	2.61
784129	6.53	2.50	1.21	2.18	5.46	2.80	1.41	2.61
234331	3.16	1.21	2.32	2.24	3.25	2.18	3.04	2.61
738970	15.96	6.13	1.21	2.29	7.41	1.31	0.82	2.61
41411	112.58	43.25	3.28	2.76	1.54	3.09	2.35	2.60
784264	5.67	2.18	1.81	3.29	2.15	3.61	2.13	2.60
813249	14.02	5.40	3.66	1.96	4.73	1.34	1.29	2.60
840530	4.05	1.56	3.14	3.14	1.61	3.33	1.76	2.60
811757	1.59	0.61	3.15	2.92	3.96	1.62	1.32	2.59
502369	1.41	0.55	3.58	2.45	2.17	3.01	1.74	2.59
744944	1.73	0.67	3.76	1.13	2.12	2.49	3.44	2.59
855634	3.16	1.22	1.55	1.65	3.18	1.13	5.42	2.59
72616	1.67	0.65	3.07	3.09	2.14	2.94	1.65	2.58
436106	4.14	1.61	2.43	2.14	3.01	3.83	1.49	2.58
487373	54.67	21.22	2.52	2.05	1.52	3.12	3.67	2.58
814154	2.29	0.89	1.83	1.77	1.85	1.52	5.87	2.57
435330	10.36	4.03	1.68	2.24	2.09	5.65	1.19	2.57
838568	53.19	20.71	1.53	3.21	1.33	4.15	2.62	2.57
137638	5.06	1.97	3.16	2.54	1.89	2.17	3.08	2.57
41207	2.05	0.80	1.72	2.29	3.16	3.58	2.07	2.57

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Table 1-1

1558642	3.11	1.21	3.27	2.26	1.72	4.08	1.50	2.56
432194	10.34	4.04	1.58	3.07	2.91	1.91	3.34	2.56
232628	4.02	1.58	4.00	1.88	4.50	1.05	1.32	2.55
951022	3.02	1.18	3.66	2.02	3.80	1.61	1.67	2.55
809824	2.66	1.05	1.68	2.11	2.41	3.25	3.24	2.54
897906	10.34	4.08	1.96	2.02	4.28	0.64	3.78	2.54
809722	50.59	19.96	0.71	0.97	3.43	3.59	3.97	2.54
138865	5.42	2.14	1.16	3.20	2.53	3.12	2.65	2.53
825012	4.46	1.76	3.39	2.40	2.05	3.22	1.61	2.53
1472689	5.15	2.03	1.97	0.59	1.72	7.13	1.27	2.53
322537	3.18	1.26	1.26	6.07	2.04	0.89	2.40	2.53
291974	57.24	22.63	3.29	1.87	1.09	4.48	1.91	2.53
307231	2.04	0.81	1.95	1.61	1.41	6.48	1.19	2.53
1638479	3.27	1.30	2.08	3.88	3.23	1.78	1.67	2.53
415415	9.68	3.83	3.25	2.43	1.49	3.21	2.26	2.53
251417	0.69	0.27	3.59	3.13	1.67	1.79	2.46	2.52
452936	5.15	2.04	3.47	2.84	3.54	1.65	1.11	2.52
488301	0.97	0.38	2.10	1.37	1.81	5.57	1.76	2.52
430235	3.43	1.36	4.46	3.50	1.54	1.77	1.34	2.52
784085	3.93	1.56	3.14	2.04	3.39	2.55	1.49	2.52
741988	1.74	0.69	1.90	3.05	2.20	3.46	1.99	2.52
627688	7.37	2.93	1.52	1.61	6.90	1.77	0.79	2.52
825859	1.64	0.65	1.30	2.26	2.23	3.48	3.31	2.52
884892	8.02	3.19	1.99	2.90	3.01	3.04	1.63	2.52
277660	14.16	5.65	1.86	2.15	2.18	3.13	3.22	2.51
76605	2.48	0.99	4.39	3.21	1.27	2.11	1.53	2.50
220069	4.81	1.92	1.69	3.29	3.04	1.86	2.61	2.50
460798	1.30	0.52	1.95	1.79	3.77	1.74	3.24	2.50
247546	11.16	4.48	1.50	1.33	1.37	2.54	5.72	2.49
814080	8.19	3.29	1.76	1.45	2.40	1.52	5.32	2.49
1422794	2.62	1.05	0.95	1.99	3.82	3.31	2.38	2.49
51981	19.62	7.89	3.06	1.82	1.65	2.42	3.50	2.49
325606	7.30	2.93	3.10	2.79	1.65	3.28	1.62	2.49
277596	2.91	1.17	1.17	2.54	1.50	6.20	1.01	2.49
788205	13.21	5.32	3.46	2.10	1.43	1.78	3.65	2.48
796527	1.35	0.55	2.22	1.81	1.52	5.45	1.39	2.48
827132	6.63	2.68	2.47	1.83	1.62	3.44	3.03	2.48
842863	11.11	4.49	3.25	2.37	1.47	2.24	3.06	2.48
29964	1.12	0.45	1.27	1.88	1.58	4.63	3.01	2.47
137984	1.63	0.66	1.72	2.25	1.34	6.05	1.01	2.47
767346	4.50	1.82	1.80	1.32	6.76	1.74	0.73	2.47
1492967	3.68	1.49	2.19	1.49	6.63	1.16	0.89	2.47
342721	14.93	6.06	3.30	1.93	5.09	0.69	1.30	2.46
76005	2.35	0.96	4.18	3.61	1.37	1.59	1.56	2.46
823850	0.78	0.32	2.69	1.51	1.29	5.06	1.76	2.46
744905	2.18	0.89	3.34	2.72	1.92	3.17	1.16	2.46
399532	6.74	2.74	1.68	2.54	1.91	3.15	3.01	2.46
950464	9.75	3.98	1.50	1.01	7.67	1.11	0.97	2.45
486340	16.47	6.73	1.85	3.58	1.43	3.51	1.87	2.45
866866	3.00	1.23	4.47	3.47	1.46	1.44	1.40	2.45
884546	156.92	64.25	2.76	1.70	1.46	3.06	3.23	2.44

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Table 1-1

897448	31.17	12.76	3.09	2.67	1.77	3.01	1.67	2.44
950989	2.48	1.02	4.36	3.15	1.27	1.86	1.55	2.44
1031583	38.01	15.59	0.37	1.52	1.75	6.11	2.45	2.44
381036	3.54	1.46	2.61	1.83	5.63	1.30	0.81	2.43
109316	12.35	5.08	1.34	0.40	2.84	0.34	7.26	2.43
448117	3.91	1.61	3.94	1.97	3.08	1.50	1.68	2.43
156045	2.01	0.83	3.16	3.14	1.81	2.33	1.71	2.43
884333	4.10	1.69	2.33	3.28	3.72	1.30	1.51	2.43
306771	3.61	1.49	3.02	3.83	1.70	1.84	1.73	2.42
430465	5.55	2.30	0.96	0.93	1.81	7.45	0.92	2.42
123755	5.06	2.10	3.75	1.13	1.03	1.10	5.05	2.41
42803	2.96	1.23	0.60	2.20	1.73	5.20	2.32	2.41
460164	0.80	0.33	2.54	3.13	2.35	3.08	0.95	2.41
1574594	3.08	1.28	4.44	3.10	1.44	1.96	1.07	2.40
141361	1.28	0.54	1.80	0.83	1.31	6.11	1.94	2.40
855336	5.69	2.37	1.65	3.16	2.36	3.39	1.43	2.40
868396	6.77	2.83	5.03	3.73	0.87	1.05	1.28	2.39
627053	11.04	4.64	1.29	2.07	5.16	2.01	1.37	2.38
815772	1.44	0.61	3.35	1.86	3.10	1.62	1.96	2.38
897547	15.69	6.62	3.93	3.84	2.46	0.78	0.84	2.37
202154	29.46	12.46	0.97	2.61	0.99	5.43	1.83	2.37
511107	7.14	3.02	0.73	1.70	3.61	3.54	2.25	2.36
810408	9.85	4.18	1.91	1.77	1.69	3.08	3.34	2.36
757222	5.14	2.18	2.47	6.61	1.12	0.68	0.91	2.36
810734	2.46	1.05	3.06	1.80	1.50	4.04	1.32	2.35
1493390	3.57	1.53	3.30	1.07	2.47	3.35	1.54	2.34
284865	2.87	1.23	3.64	3.21	1.66	1.49	1.70	2.34
488033	3.14	1.34	2.41	3.80	1.46	3.21	0.82	2.34
37665	1.01	0.43	0.55	3.88	2.77	3.16	1.33	2.33
138861	1.72	0.74	1.34	3.12	1.63	3.22	2.35	2.33
272049	6.87	2.95	3.26	1.35	1.69	4.65	0.71	2.33
427812	9.94	4.27	2.58	1.48	5.45	1.15	0.97	2.33
809995	2.80	1.21	3.69	1.55	2.04	3.10	1.24	2.32
449275	3.81	1.64	5.51	1.68	1.24	2.01	1.16	2.32
731337	0.75	0.32	3.30	3.09	1.35	1.91	1.95	2.32
854570	4.11	1.78	4.79	3.45	0.94	1.54	0.83	2.31
767988	3.64	1.58	1.57	3.20	3.21	1.89	1.63	2.30
455271	1.64	0.72	5.02	2.60	1.17	1.48	1.22	2.30
130136	0.29	0.13	1.17	1.08	0.84	0.80	7.57	2.29
757191	6.08	2.66	1.09	0.88	5.46	2.03	1.99	2.29
266500	7.14	3.12	1.54	3.23	1.95	3.65	1.08	2.29
725503	4.55	1.99	3.35	2.31	1.33	3.39	1.03	2.28
1555523	1.21	0.53	1.80	6.52	1.30	0.93	0.86	2.28
629498	3.73	1.64	4.45	3.42	1.09	1.19	1.23	2.28
781401	2.67	1.18	1.40	1.34	2.90	0.55	5.16	2.27
632137	0.80	0.35	4.14	1.33	3.68	1.07	1.12	2.27
293830	4.43	1.96	1.87	1.37	5.66	1.25	1.18	2.26
50562	34.20	15.15	6.49	1.87	0.28	0.43	2.21	2.26
243784	2.99	1.33	3.68	3.50	1.79	1.35	0.94	2.25
209167	3.29	1.46	5.12	1.17	2.88	0.92	1.17	2.25
251727	4.88	2.17	1.20	3.39	1.73	3.26	1.65	2.25

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Table 1-1

284545	1.10	0.49	1.06	3.27	0.97	4.66	1.26	2.24
504290	50.88	22.72	1.27	1.74	5.93	1.07	1.18	2.24
71672	4.77	2.14	3.51	1.66	3.03	1.97	0.99	2.23
279394	3.18	1.42	1.37	1.39	5.66	0.95	1.78	2.23
309864	2.49	1.12	8.06	0.69	0.90	0.79	0.67	2.22
291394	6.46	2.92	1.70	1.25	5.58	1.18	1.37	2.22
289645	0.92	0.42	1.62	1.02	1.30	5.62	1.50	2.21
460218	2.10	0.95	1.71	1.76	3.37	3.35	0.86	2.21
856174	0.25	0.11	3.70	4.65	0.88	0.91	0.92	2.21
767784	8.86	4.05	5.50	1.03	1.73	1.72	0.97	2.19
826459	12.36	5.65	0.94	3.16	1.94	3.18	1.72	2.19
141336	2.12	0.97	0.78	0.91	7.64	0.64	0.94	2.18
122239	6.50	2.98	4.86	3.17	0.88	0.92	1.06	2.18
840698	7.45	3.42	3.42	3.27	1.39	1.58	1.22	2.18
303139	2.17	1.00	0.98	0.85	2.90	5.31	0.82	2.17
277761	2.43	1.12	3.26	1.81	1.46	3.22	1.08	2.17
471641	4.79	2.22	0.68	4.45	0.89	4.15	0.64	2.16
470114	3.09	1.44	2.04	3.03	1.58	3.16	0.97	2.15
33045	0.63	0.29	5.38	1.08	1.25	1.95	1.09	2.15
84078	0.34	0.16	0.79	0.75	3.03	4.97	1.17	2.14
111389	2.59	1.21	3.22	1.26	1.20	3.23	1.78	2.14
1536991	10.79	5.05	3.61	1.25	3.84	1.06	0.92	2.14
770935	86.21	40.44	0.25	2.50	1.55	3.29	3.08	2.13
281191	7.36	3.45	3.30	1.86	3.23	0.81	1.46	2.13
149895	6.05	2.84	1.33	1.44	6.25	0.94	0.69	2.13
648046	15.56	7.32	0.56	0.94	3.27	2.53	3.34	2.13
855236	2.75	1.30	1.11	1.65	1.52	5.25	1.06	2.12
740780	4.71	2.25	1.78	6.08	0.90	0.38	1.35	2.10
844768	6.47	3.08	4.79	3.24	0.75	0.87	0.85	2.10
811097	2.59	1.23	5.78	1.43	0.76	1.89	0.62	2.10
731255	2.04	0.98	1.12	1.83	1.35	5.14	1.01	2.09
950607	19.79	9.50	2.04	1.14	5.08	1.05	1.11	2.08
1472150	35.19	16.93	3.00	1.41	1.13	3.73	1.12	2.08
52338	2.91	1.41	3.16	1.49	4.05	0.57	1.07	2.07
781061	0.73	0.35	0.76	1.88	3.32	3.43	0.88	2.05
1613940	3.48	1.70	3.02	3.14	0.88	2.54	0.68	2.05
1604717	13.38	6.59	1.03	1.41	5.95	0.92	0.85	2.03
151477	2.44	1.21	0.96	1.86	0.96	5.73	0.57	2.02
563444	6.23	3.10	1.64	3.21	0.69	3.64	0.86	2.01
827168	6.51	3.24	1.91	0.82	5.31	1.07	0.95	2.01
845780	5.95	2.97	4.42	3.23	0.81	0.67	0.89	2.00
743574	6.42	3.21	4.33	3.22	0.89	0.69	0.88	2.00
431597	5.45	2.73	1.67	0.89	5.75	0.72	0.97	2.00
740941	12.33	6.23	6.11	1.20	0.62	0.67	1.29	1.98
343688	6.94	3.54	1.39	1.27	5.47	0.79	0.88	1.96
75059	21.82	11.17	3.00	1.01	1.04	3.21	1.50	1.95
782513	5.78	2.98	1.16	0.84	5.53	1.41	0.75	1.94
366815	71.61	36.97	5.26	1.35	1.25	0.46	1.38	1.94
132911	52.56	27.26	3.07	1.21	3.40	0.74	1.22	1.93
282895	3.91	2.03	1.03	1.04	5.87	0.90	0.81	1.93
512116	4.59	2.41	1.08	0.94	5.62	1.08	0.80	1.90

Table 1-1

291706	2.41	1.27	1.34	1.06	0.98	0.91	5.20	1.90
50114	0.83	0.44	0.97	1.06	0.39	3.57	3.45	1.89
450464	3.97	2.13	3.23	1.41	3.18	0.56	0.95	1.86
626462	5.86	3.24	3.91	3.03	0.70	0.59	0.81	1.81
867717	5.61	3.15	3.27	3.01	0.87	0.68	1.08	1.78
462953	3.21	1.90	0.67	5.53	1.05	0.63	0.57	1.69
41287	0.72	0.45	0.73	0.95	0.53	5.14	0.61	1.59
122428	2.03	1.29	5.48	0.55	0.63	0.63	0.58	1.57

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Table 1-2

Clone	Aver of Tumors	Aver. of Normals	MPM-116 / Aver	MPM-116 / Aver	MPM-117 / Aver	MPM-118 / Aver	MPM-119 / Aver	Aver. Fold
788180	25.18	0.81	62.98	3.35	9.48	55.67	24.72	31.24
646037	24.42	1.02	38.80	10.71	20.96	13.10	35.99	23.91
1034473	33.61	1.51	39.30	2.42	16.40	18.87	34.35	22.27
281003	128.77	6.30	25.82	30.44	5.57	24.33	15.96	20.43
773479	12.32	0.65	24.85	24.44	9.41	16.91	18.67	18.85
823940	22.39	1.32	15.54	10.31	45.60	5.40	8.09	16.99
281039	14.05	0.94	1.73	6.90	1.46	63.60	1.27	14.99
46166	13.13	0.93	2.81	31.75	16.71	15.27	4.05	14.12
42415	6.86	0.51	4.67	6.71	15.78	1.60	38.87	13.52
291255	15.20	1.35	10.61	10.39	17.35	9.54	8.56	11.29
308682	8.99	0.87	8.35	12.44	6.96	9.39	14.72	10.37
450049	18.37	1.83	8.45	6.05	7.47	5.21	23.07	10.05
283312	63.94	6.63	11.46	5.48	5.23	11.97	14.09	9.65
432194	10.34	1.11	5.77	11.20	10.61	6.96	12.20	9.35
35626	9.42	1.09	6.10	9.04	16.67	3.16	8.40	8.67
222157	8.80	1.02	13.68	8.34	7.21	3.07	11.05	8.67
814053	14.66	1.70	8.20	1.30	6.73	19.59	7.22	8.61
811867	24.57	2.97	9.33	7.93	6.31	11.68	6.18	8.28
35058	15.59	1.89	3.32	10.65	5.05	16.86	5.29	8.24
971279	54.34	6.63	8.84	8.00	7.58	8.74	7.81	8.20
293635	26.47	3.44	5.13	10.21	7.80	7.55	7.78	7.69
32160	26.80	3.59	6.47	7.13	8.59	6.37	8.77	7.47
754280	23.83	3.20	15.06	7.80	8.20	3.02	3.20	7.46
282089	11.18	1.51	1.86	11.16	1.40	21.82	0.82	7.41
745347	2.15	0.29	3.74	8.94	8.54	8.80	6.91	7.39
67401	1.47	0.20	1.25	1.47	30.35	2.21	1.11	7.28
293651	13.35	1.84	3.60	7.75	11.33	6.53	7.12	7.26
784168	53.04	7.37	2.50	6.64	8.80	8.22	9.84	7.20
811603	19.62	2.74	8.80	6.79	5.12	7.74	7.36	7.16
486035	24.75	3.47	5.79	11.37	4.91	5.88	7.72	7.13
809603	49.03	6.94	5.63	5.54	6.31	7.30	10.54	7.06
1048810	20.15	3.04	7.11	10.78	4.14	7.28	3.86	6.63
756600	47.06	7.13	6.98	3.61	3.71	8.73	9.97	6.60
772304	113.14	18.10	7.98	4.62	4.60	5.98	8.08	6.25
1631713	5.68	0.93	5.38	6.95	7.45	5.29	5.61	6.13
838366	11.15	1.82	4.41	5.92	6.20	5.88	8.19	6.12
757435	365.78	59.86	3.80	3.09	17.09	3.11	3.46	6.11
1556526	0.88	0.15	0.88	2.02	1.15	24.74	1.00	5.96
450307	9.39	1.62	10.72	8.38	5.22	1.77	2.92	5.80
796161	30.31	5.27	7.41	5.98	4.96	5.01	5.40	5.75
1034738	22.40	3.90	4.98	4.85	5.57	8.17	5.15	5.74
49302	4.88	0.86	4.58	5.05	13.97	1.95	2.84	5.68
292515	16.22	2.86	4.63	8.96	3.74	4.17	6.83	5.67
810220	2.17	0.39	8.61	5.96	2.67	6.95	3.82	5.60
207029	81.88	14.79	3.96	4.34	5.68	5.71	8.00	5.54
415700	3.36	0.61	4.32	5.47	9.05	2.89	5.94	5.53
449112	42.54	7.72	5.75	5.33	5.65	5.97	4.85	5.51
531028	21.14	3.89	6.16	6.20	5.18	4.09	5.54	5.44
362755	16.82	3.11	6.23	6.62	4.84	4.44	4.90	5.41
509887	39.47	7.39	5.15	5.67	3.89	4.14	7.85	5.34
191904	7.67	1.44	5.95	4.87	5.16	4.34	6.27	5.32
877835	23.06	4.34	7.48	3.06	4.32	5.71	6.02	5.32

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Table 1-2

771317	9.44	1.78	3.90	5.78	4.69	7.70	5.31
549101	12.81	2.43	7.81	3.40	5.03	7.02	5.26
84955	5.26	1.01	8.05	6.43	6.35	2.52	5.21
461670	8.90	1.72	3.21	6.57	7.68	3.75	5.19
197525	9.52	1.85	2.67	8.08	4.07	6.57	5.16
730739	36.49	7.10	4.49	4.01	10.50	3.62	5.14
240694	4.53	0.90	4.65	7.82	3.10	3.41	5.01
593185	28.06	5.61	1.33	3.36	3.94	10.92	5.00
212165	41.96	8.42	7.66	4.81	6.54	2.71	4.99
268211	3.43	0.70	4.14	3.18	3.13	2.23	4.93
233419	5.55	1.14	3.13	6.59	6.63	2.94	4.87
296788	3.27	0.67	4.84	4.90	7.08	2.63	4.85
810558	14.49	3.00	3.18	4.47	4.01	4.93	4.83
264895	7.86	1.63	3.07	6.53	4.76	3.25	4.82
51773	11.48	2.40	5.99	3.55	3.22	7.62	4.77
191603	22.14	4.64	6.96	6.89	2.33	3.85	4.77
417908	12.10	2.57	9.22	5.41	4.37	1.99	4.71
50188	10.75	2.29	5.42	4.91	4.42	3.76	4.69
284701	33.05	7.05	3.72	4.93	2.53	9.40	4.68
416436	11.08	2.37	7.73	5.37	3.95	4.54	4.67
321470	7.74	1.68	4.78	6.01	4.56	2.65	4.61
449275	3.81	0.83	10.88	3.32	2.44	3.97	4.58
263697	4.23	0.93	5.22	5.51	7.03	1.91	4.57
266106	20.68	4.53	4.04	4.70	9.22	2.05	4.57
194364	5.44	1.19	2.81	3.35	9.83	4.15	4.56
259374	10.51	2.33	4.05	2.96	1.50	8.52	4.50
877641	67.93	15.10	8.40	2.61	1.99	5.49	4.50
283173	17.85	3.97	10.94	2.48	2.73	4.55	4.49
868282	8.99	2.01	4.17	4.41	5.09	4.45	4.48
770066	11.43	2.60	1.11	1.71	4.03	13.55	4.40
950688	52.65	11.99	5.18	2.58	3.06	4.94	4.39
490178	24.55	5.63	2.55	2.07	13.03	1.58	4.36
30428	4.29	0.99	0.90	2.03	2.95	11.84	4.35
210405	34.02	7.84	3.39	3.97	5.43	4.21	4.34
795907	5.39	1.25	1.95	2.24	4.60	0.83	4.31
47542	8.07	1.88	6.90	3.68	2.63	4.23	4.30
297439	48.60	11.33	4.18	7.63	3.83	1.95	4.29
1472689	5.15	1.21	3.31	0.99	2.88	11.98	4.26
897767	2.07	0.49	3.67	3.81	4.12	3.26	4.25
289891	7.82	1.84	4.50	2.99	9.38	2.41	4.25
853968	12.10	2.86	5.03	5.67	7.48	1.76	4.23
840788	23.03	5.46	4.18	3.11	1.97	7.77	4.22
856447	8.81	2.09	9.08	2.15	2.21	4.88	4.22
346889	0.89	0.21	2.54	5.10	1.70	6.26	4.21
321706	7.80	1.86	5.63	0.98	9.88	1.19	4.20
855749	50.50	12.03	5.65	3.70	3.56	3.56	4.20
1031583	38.01	9.06	0.63	2.62	3.01	10.51	4.20
785913	3.35	0.80	4.02	3.95	7.94	2.07	4.19
746152	9.35	2.23	7.33	4.05	7.60	1.47	4.18
845363	29.59	7.07	4.62	3.53	2.38	5.97	4.18
377246	12.60	3.02	3.68	2.77	11.38	1.14	4.17
129024	4.30	1.04	7.23	0.75	2.32	2.43	4.13
150262	13.66	3.31	3.87	5.14	4.58	3.46	4.12
825207	11.96	2.92	3.12	3.72	4.18	5.49	4.09

Table 1-2

1030855	14.86	3.64	4.82	2.58	7.86	4.02	4.08
878127	3.53	0.87	4.48	6.05	4.44	2.62	4.07
138444	4.04	1.00	7.21	2.94	4.04	2.44	4.06
768395	14.29	3.54	5.36	4.80	4.35	3.14	2.53
788541	12.11	3.01	2.87	3.90	7.56	1.94	3.89
1468260	4.53	1.13	7.56	0.78	4.31	2.33	5.15
787938	5.09	1.27	1.46	4.56	6.98	5.35	1.72
258300	18.15	4.53	2.52	4.17	7.79	0.73	4.84
208082	7.90	1.98	3.29	6.85	3.52	3.30	3.00
785910	4.01	1.01	3.80	2.26	9.32	1.33	3.21
287728	2.76	0.70	0.75	5.13	1.25	11.82	0.89
687297	12.18	3.12	4.57	4.32	4.27	2.73	3.63
741067	64.30	16.50	0.91	4.38	2.37	7.31	4.51
1031598	5.18	1.34	0.69	2.70	2.63	9.79	3.58
366815	71.61	18.49	10.51	2.69	2.49	0.91	2.76
323474	1.25	0.32	6.77	4.12	2.60	2.99	2.88
288695	3.41	0.88	4.88	4.64	5.25	3.06	1.48
204111	3.38	0.87	3.40	4.11	3.20	3.52	5.07
242952	16.94	4.39	4.50	3.65	3.98	4.16	2.99
1631747	5.09	1.33	5.74	6.76	2.76	2.44	1.49
48286	2.34	0.61	3.34	2.74	4.95	3.47	4.67
745503	42.62	11.14	2.97	4.02	3.39	3.08	5.68
744846	2.69	0.70	4.56	5.57	3.31	4.45	1.24
454771	2.69	0.70	7.92	2.22	2.30	1.94	4.70
233464	14.24	3.73	2.79	2.89	5.83	3.29	4.26
250869	123.92	32.54	10.99	2.78	2.27	1.03	1.97
842925	4.61	1.21	3.52	3.54	4.61	4.62	2.67
843094	49.18	13.00	4.51	3.53	3.71	3.00	4.17
587415	12.98	3.44	6.76	3.20	6.42	1.08	1.39
33715	1.36	0.37	2.84	3.84	4.39	3.91	3.66
75044	3.46	0.93	4.59	3.85	2.61	3.71	3.84
1467207	3.68	0.99	2.51	4.57	4.41	2.93	4.17
366132	6.22	1.68	4.94	2.88	2.87	4.12	3.77
813973	3.24	0.88	3.24	3.78	4.03	3.23	4.23
814017	86.17	23.42	5.13	5.73	3.05	1.59	2.90
785616	11.47	3.12	4.63	4.47	3.42	3.47	2.37
42803	2.96	0.81	0.91	3.34	2.63	7.89	3.52
488964	7.77	2.13	11.81	2.73	1.04	1.76	0.88
151055	27.32	7.51	3.65	6.52	1.80	2.91	3.31
784258	10.08	2.77	4.79	2.92	5.87	1.93	2.67
81331	2.84	0.78	1.10	2.95	0.88	12.05	1.18
897042	4.95	1.36	6.51	3.85	2.87	3.80	1.14
771048	10.54	2.90	4.89	3.20	3.32	2.85	3.91
795265	4.58	1.26	1.26	2.63	2.84	9.65	1.76
753252	7.78	2.14	2.88	3.17	3.38	4.62	4.10
430465	5.55	1.53	1.44	1.39	2.71	11.18	1.38
429678	3.12	0.86	3.79	2.41	5.14	4.64	2.08
47384	4.22	1.17	2.95	3.72	4.97	3.42	2.98
342271	3.90	1.09	3.73	1.46	4.16	6.29	2.35
712950	11.53	3.21	0.83	1.53	3.05	11.90	0.65
245547	5.86	1.63	1.33	6.79	3.91	4.02	1.91
1475987	2.96	0.83	4.18	2.40	3.01	6.04	2.26
358850	21.29	5.98	6.12	3.37	2.69	1.80	3.82
45327	8.18	2.30	2.35	3.39	3.66	4.62	3.78

Table 1-2

950410	3.18	0.89	4.81	7.55	3.00	2.66	2.76	3.56
1592006	5.30	1.51	4.10	3.01	3.34	3.68	3.47	3.52
741474	4.93	1.40	2.90	2.23	3.62	5.57	3.24	3.51
292042	9.39	2.67	3.33	4.22	4.13	3.14	2.73	3.51
280217	20.52	5.86	4.76	0.46	1.34	10.23	0.72	3.50
42636	1.11	0.32	2.78	3.16	4.86	2.57	4.13	3.50
550141	78.20	22.40	5.62	2.32	2.57	3.16	3.79	3.49
159608	14.43	4.14	6.82	1.07	1.06	5.09	3.39	3.49
383185	12.04	3.46	6.25	2.54	6.69	0.98	0.94	3.48
491184	6.35	1.83	4.07	1.43	10.01	0.85	1.00	3.47
786525	1.46	0.42	2.15	1.29	2.53	10.04	1.31	3.46
305538	11.44	3.31	4.78	4.20	1.98	1.85	4.49	3.46
415437	3.52	1.02	2.69	3.45	3.10	4.16	3.88	3.46
259350	22.84	6.64	2.91	2.83	2.97	3.77	4.71	3.44
950709	4.17	1.22	5.93	2.37	2.11	4.13	2.61	3.43
141505	6.38	1.86	2.88	4.20	3.06	2.08	4.90	3.42
109200	3.17	0.93	5.89	2.59	3.19	2.96	2.46	3.42
1390584	6.54	1.91	1.98	3.12	3.26	8.11	0.63	3.42
823819	11.96	3.51	4.50	4.09	2.11	2.94	3.43	3.41
272750	20.57	6.04	3.75	5.31	2.77	2.65	2.54	3.40
246869	4.68	1.38	4.93	2.40	3.61	2.07	3.98	3.40
784253	11.76	3.47	2.81	4.36	3.28	2.90	3.61	3.39
490766	3.48	1.03	4.47	3.60	2.64	2.91	3.27	3.38
356863	3.18	0.94	4.17	3.83	2.02	3.24	3.63	3.38
837904	103.13	30.63	2.21	2.23	2.11	4.52	5.77	3.37
462468	3.24	0.96	3.67	4.25	3.86	1.95	3.06	3.36
121997	5.10	1.52	4.66	2.43	5.54	1.60	2.55	3.36
700900	9.94	3.00	3.26	2.88	3.29	3.75	3.40	3.31
26616	1.94	0.59	4.02	2.79	3.28	3.05	3.40	3.31
1589973	5.17	1.57	2.96	3.72	2.30	5.22	2.31	3.30
392678	34.95	10.61	2.24	2.72	3.38	3.80	4.32	3.29
586725	2.32	0.70	3.69	2.64	2.18	3.31	4.64	3.29
121489	34.70	10.55	3.98	4.08	3.24	2.67	2.47	3.29
503851	18.15	5.54	1.87	3.27	5.43	2.90	2.90	3.28
854874	2.22	0.68	2.50	3.02	5.99	2.47	2.32	3.26
877832	44.43	13.65	3.45	3.31	2.92	3.09	3.50	3.25
253009	115.86	35.75	1.83	3.37	1.51	5.38	4.13	3.24
824723	14.11	4.37	2.37	2.55	3.40	5.30	2.52	3.23
755409	7.81	2.43	3.30	3.12	4.05	3.18	2.47	3.22
506564	12.93	4.03	4.44	2.86	3.21	1.98	3.55	3.21
109153	5.46	1.70	4.21	2.85	3.08	2.33	3.55	3.20
213682	13.07	4.10	0.63	2.78	2.14	7.22	3.16	3.19
133717	9.46	2.97	2.19	2.22	3.36	2.66	5.49	3.18
361659	13.43	4.23	1.54	3.83	4.60	3.93	1.99	3.18
232628	4.02	1.27	4.95	2.33	5.56	1.30	1.63	3.16
283034	9.61	3.05	3.07	5.05	2.86	2.31	2.46	3.15
490232	2.68	0.85	3.64	3.48	3.06	1.82	3.75	3.15
781366	12.06	3.84	3.48	2.65	1.25	2.22	6.10	3.14
66317	5.50	1.76	6.84	2.02	1.77	4.59	0.44	3.13
359781	7.82	2.50	1.84	5.41	2.09	3.84	2.45	3.13
564801	12.35	3.96	2.96	1.38	8.87	1.73	0.67	3.12
587595	559.22	179.15	0.74	2.46	3.02	6.40	2.98	3.12
39885	0.94	0.30	0.92	2.92	4.86	4.97	1.87	3.11
45578	5.05	1.63	4.85	2.27	2.38	3.60	2.39	3.10

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Table 1-2

743749	5.10	1.65	3.05	2.98	3.05	1.42	3.10
839081	16.60	5.37	5.25	5.49	0.97	2.62	3.09
109316	12.35	4.01	1.69	0.50	3.59	0.43	3.08
358083	2.45	0.80	3.44	2.58	4.41	1.95	3.07
130773	3.71	1.21	2.86	3.98	3.19	2.42	3.07
610011	34.63	11.27	3.99	2.71	2.59	2.28	3.07
429574	3.77	1.23	2.74	4.01	3.30	1.01	3.06
167205	7.85	2.56	2.90	5.74	3.48	1.88	3.06
825718	4.03	1.32	2.59	2.65	4.00	3.21	3.06
42659	10.21	3.36	3.63	3.18	3.06	2.09	3.04
1631682	1.61	0.53	4.08	2.09	3.06	2.23	3.03
843234	7.02	2.32	3.12	3.14	2.40	2.69	3.03
290642	7.76	2.56	4.18	2.71	2.32	3.00	3.02
51700	3.66	1.21	3.02	2.75	3.37	2.08	3.02
214006	4.67	1.55	6.05	4.62	1.41	2.11	3.02
431286	13.81	4.59	2.40	3.23	3.52	2.10	3.01
781454	9.75	3.24	2.57	1.19	9.17	1.13	3.01
433253	7.29	2.43	2.31	2.35	2.05	5.26	3.00
359661	26.24	8.79	2.02	4.95	1.82	3.95	2.99
811953	17.84	5.98	3.25	3.61	3.69	1.97	2.98
196345	122.93	41.22	1.48	2.47	2.71	3.86	2.98
950473	9.36	3.14	2.36	3.35	2.97	2.65	2.98
46294	1.03	0.35	1.45	2.41	1.44	5.75	2.97
37980	0.84	0.29	1.32	2.54	1.61	7.51	2.96
512116	4.59	1.55	1.67	1.46	8.72	1.68	2.96
137638	5.06	1.71	3.63	2.92	2.17	2.49	2.95
810753	4.95	1.68	3.05	2.91	3.48	2.96	2.95
592403	0.46	0.16	0.70	2.31	2.27	6.90	2.95
273546	9.10	3.09	4.02	3.24	2.32	2.44	2.95
238821	6.54	2.22	3.78	1.07	3.22	0.62	2.94
111812	5.56	1.89	3.45	4.26	4.44	1.20	2.94
840894	34.81	11.87	1.12	3.23	2.53	4.70	2.93
50114	0.83	0.28	1.50	1.65	0.60	5.53	2.92
971367	35.22	12.06	3.23	1.99	1.70	5.64	2.92
1473300	12.44	4.26	1.78	2.25	2.22	3.03	2.92
824704	2.04	0.70	3.07	2.49	3.23	2.63	2.91
897670	6.35	2.19	3.64	3.98	2.74	2.73	2.90
430153	4.46	1.54	3.45	3.54	2.88	1.69	2.90
31225	4.76	1.64	2.16	2.29	4.85	2.20	2.90
743828	3.34	1.15	1.18	1.72	5.33	1.00	2.90
1521977	2.08	0.72	3.62	1.94	2.94	3.07	2.90
511632	7.85	2.71	2.19	2.68	1.95	4.09	2.89
360885	40.29	13.93	4.07	2.17	4.57	1.22	2.89
1492238	13.96	4.83	3.53	3.13	2.20	3.54	2.89
784830	1.83	0.63	4.04	1.72	3.99	1.90	2.88
767798	5.70	1.98	2.68	2.09	2.38	3.81	2.88
840590	21.70	7.54	2.19	1.06	2.15	7.48	2.88
878316	5.34	1.86	2.30	2.73	1.60	4.36	2.87
725489	26.71	9.34	3.59	3.28	2.57	3.29	2.86
209167	3.29	1.15	6.50	1.48	3.65	1.17	2.86
488431	10.48	3.68	4.07	2.58	2.02	1.74	2.85
731308	4.84	1.70	3.77	3.06	2.31	1.95	2.85
565235	35.83	12.59	1.31	3.41	1.55	7.11	2.85
504290	50.88	17.89	1.61	2.21	7.54	1.36	2.84

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Table 1-2

823588	7.72	2.72	3.62	3.20	2.49	2.44	2.83
878544	19.20	6.78	5.95	1.60	3.38	1.81	2.83
26736	9.52	3.36	3.45	0.77	0.57	6.03	2.83
145388	2.66	0.94	3.12	3.26	4.21	2.28	2.83
76196	2.53	0.90	1.68	2.14	2.06	3.22	2.83
624271	5.74	2.03	3.08	2.14	1.61	6.02	2.82
66902	3.21	1.14	3.84	1.85	1.41	0.79	2.82
86160	2.10	0.74	2.49	3.24	2.74	2.51	2.82
526945	1.14	0.40	3.22	1.77	2.51	3.16	2.82
131621	10.21	3.63	3.64	1.77	4.66	1.90	2.82
815036	1.62	0.58	3.61	3.75	2.37	3.01	2.81
416833	6.07	2.16	1.37	3.86	1.76	4.96	2.81
810221	3.85	1.37	1.41	2.35	3.96	2.88	2.81
1536991	10.79	3.85	4.74	1.63	5.04	1.39	2.80
1240220	7.60	2.71	0.70	2.40	5.33	4.42	2.80
125308	2.61	0.93	4.31	2.08	3.64	2.05	2.80
502690	4.09	1.46	2.11	3.13	2.39	4.17	2.80
1635874	6.06	2.17	5.71	2.90	1.66	2.16	2.79
32076	1.03	0.37	1.94	2.97	2.60	3.25	2.79
856535	1.40	0.50	3.08	3.52	2.81	2.44	2.79
30793	7.89	2.84	2.22	2.49	3.31	3.04	2.78
826102	4.19	1.51	1.94	1.78	7.59	1.08	2.78
356992	21.95	7.93	3.72	2.43	2.23	3.22	2.77
810571	4.37	1.58	1.62	3.67	1.77	4.25	2.76
365098	4.93	1.78	4.88	1.79	3.50	1.53	2.76
788655	7.66	2.78	2.38	1.89	4.08	3.62	2.76
186918	3.04	1.10	1.49	2.82	2.33	5.76	2.76
842784	326.54	118.59	0.68	2.49	1.56	5.61	2.75
127396	14.07	5.12	2.63	3.54	0.99	4.76	2.75
261472	9.31	3.39	2.65	1.79	2.40	5.00	2.75
813179	6.60	2.40	1.14	8.50	0.98	2.38	2.75
240430	3.52	1.28	5.57	1.49	1.68	2.99	2.74
1435029	1.84	0.67	2.78	3.83	3.22	2.31	2.74
124824	30.85	11.28	2.73	1.75	1.56	2.43	2.73
1493390	3.57	1.31	3.84	1.25	2.88	3.90	2.73
251936	7.48	2.74	3.40	3.01	2.19	2.17	2.73
343609	1.58	0.58	2.30	2.63	3.03	2.56	2.73
125722	3.28	1.21	4.28	2.15	2.60	3.74	2.72
322051	11.58	4.27	2.00	2.69	3.96	1.51	2.71
756556	17.53	6.47	1.96	2.33	5.07	2.59	2.71
430318	10.87	4.02	1.74	2.76	3.55	1.94	2.71
795555	3.38	1.25	3.07	3.53	2.44	2.31	2.70
951125	18.86	7.00	2.18	5.16	1.53	2.32	2.69
843150	5.13	1.90	2.80	3.47	2.10	1.72	2.69
50772	18.10	6.74	1.30	2.66	2.08	5.85	2.68
80500	140.81	52.48	0.85	2.49	1.54	4.92	2.68
137189	5.26	1.96	1.82	3.19	2.48	3.67	2.68
279482	8.66	3.25	2.09	1.33	7.28	0.95	2.67
745103	8.87	3.33	1.82	3.08	3.04	1.84	2.67
760148	2.93	1.10	2.27	2.03	3.48	3.23	2.66
823615	9.40	3.54	3.54	1.46	5.77	1.58	2.65
783645	6.96	2.63	3.48	2.53	3.22	1.85	2.65
81578	12.77	4.82	3.38	2.44	4.22	1.59	2.65
785793	55.68	21.05	3.09	2.27	3.82	1.77	2.65

Table 1-2

277660	14.16	5.37	96	2.26	2.29	3.29	3.39	2.64
66336	1.67	0.63	4.14	4.60	4.12	0.16	0.16	2.63
1630990	20.64	7.84	4.29	2.18	1.71	4.51	0.48	2.63
247609	3.15	1.20	2.53	1.52	2.16	3.23	3.74	2.63
898123	4.77	1.81	1.92	3.20	3.04	1.92	3.07	2.63
40136	5.23	1.99	1.90	1.77	2.01	1.67	5.77	2.62
46367	1.63	0.62	1.73	1.61	1.24	7.45	1.09	2.62
281072	5.02	1.92	1.08	2.04	1.92	5.46	2.57	2.62
1606837	23.76	9.09	3.80	1.46	1.83	3.18	2.79	2.61
308726	14.73	5.64	3.93	2.00	4.67	0.90	1.56	2.61
784116	0.26	0.10	2.07	3.32	3.40	2.11	2.15	2.61
46620	5.25	2.02	1.48	2.20	1.83	3.69	3.83	2.61
504544	12.31	4.73	1.63	2.83	1.76	5.44	1.35	2.60
279394	3.18	1.23	1.59	1.61	6.58	1.11	2.07	2.59
262865	30.48	11.78	3.45	2.03	4.88	0.98	1.59	2.59
123980	2.38	0.92	1.80	3.18	2.76	1.49	3.71	2.59
293830	4.43	1.72	2.14	1.56	6.45	1.42	1.34	2.58
383188	2.79	1.08	3.03	2.15	1.40	2.92	3.40	2.58
853998	12.39	4.81	1.79	2.00	3.76	2.32	3.01	2.58
813651	4.96	1.93	1.72	2.40	2.48	3.04	3.24	2.58
203350	1.91	0.74	2.76	1.43	3.30	3.24	2.14	2.57
240961	2.11	0.82	2.13	4.67	3.19	1.71	1.17	2.57
1035765	6.21	2.41	2.60	0.83	3.16	0.47	5.78	2.57
970271	3.16	1.23	2.05	3.35	2.83	1.20	3.37	2.56
950836	34.79	13.60	2.31	1.27	6.82	0.77	1.62	2.56
461699	3.44	1.35	1.58	2.10	5.96	1.28	1.84	2.55
743851	8.22	3.22	3.05	2.50	2.28	3.39	1.54	2.55
731290	11.60	4.56	1.16	2.19	1.46	7.52	0.38	2.54
1475842	224.84	89.33	0.55	1.42	1.77	6.27	2.56	2.52
796513	17.83	7.09	3.08	2.43	2.08	3.84	1.14	2.51
82905	1.21	0.48	2.88	1.65	1.67	3.07	3.25	2.50
123755	5.06	2.03	3.88	1.17	1.06	1.14	5.22	2.49
884606	33.46	13.42	2.43	1.59	6.84	0.91	0.70	2.49
323611	1.25	0.50	3.60	1.64	1.66	2.19	3.33	2.48
1472150	35.19	14.23	3.57	1.68	1.35	4.43	1.33	2.47
950574	28.90	11.69	3.24	3.20	3.55	1.12	1.25	2.47
345056	0.87	0.35	1.32	3.06	3.37	2.76	1.82	2.47
487499	4.41	1.79	1.73	2.00	5.71	2.00	0.89	2.47
289071	37.48	15.32	1.87	2.50	5.68	1.17	1.01	2.45
1604342	1.97	0.81	1.10	1.51	0.94	6.33	2.34	2.45
896914	18.03	7.40	3.11	4.47	0.31	3.53	0.78	2.44
251330	9.21	3.78	1.73	1.78	2.05	3.30	3.33	2.44
470114	3.09	1.27	2.30	3.43	1.78	3.57	1.10	2.44
854678	6.21	2.55	1.30	7.14	1.43	0.90	1.41	2.44
245860	30.36	12.47	4.73	1.10	4.77	0.61	0.96	2.43
28436	0.89	0.37	1.13	1.64	1.72	5.29	2.37	2.43
344589	53.28	21.92	1.02	3.29	3.08	2.11	2.65	2.43
511952	225.66	92.92	0.39	2.42	0.61	7.65	1.07	2.43
898198	14.33	5.93	1.87	2.53	3.20	1.41	3.07	2.42
291706	2.41	1.00	1.70	1.35	1.24	1.16	6.59	2.41
258521	3.33	1.39	1.28	6.91	0.97	0.98	1.86	2.40
1412481	8.41	3.50	0.22	0.14	0.25	11.19	0.20	2.40
1475881	14.80	6.17	0.78	2.10	1.60	4.22	3.29	2.40
200599	13.42	5.61	3.26	1.35	4.93	0.84	1.59	2.39

Table 1-2

252904	5.40	2.26		1.41	3.30	1.76	1.77	2.39
430614	2.38	1.00	2.34	3.41	1.17	4.02	0.99	2.39
381036	3.54	1.49	2.56	1.79	5.52	1.27	0.79	2.38
448117	3.91	1.64	3.86	1.93	3.01	1.46	1.64	2.38
250673	2.66	1.12	5.54	1.03	1.65	1.42	2.21	2.37
593929	17.74	7.51	3.61	1.43	5.14	0.93	0.70	2.36
841615	12.16	5.15	2.59	1.62	5.18	1.30	1.11	2.36
52338	2.91	1.24	3.59	1.69	4.60	0.65	1.22	2.35
137254	1.35	0.58	3.41	1.79	3.95	1.23	1.38	2.35
767994	4.29	1.83	2.20	1.22	7.00	0.55	0.73	2.34
197765	8.83	3.78	2.35	0.96	6.16	0.88	1.33	2.34
254310	10.26	4.39	2.47	1.99	5.33	1.07	0.80	2.33
855244	15.78	6.78	4.53	0.61	5.42	0.42	0.66	2.33
144926	9.20	3.96	3.10	1.65	2.25	3.17	1.43	2.32
565779	31.62	13.68	3.23	1.26	1.97	3.57	1.53	2.31
563451	4.17	1.82	3.24	2.08	3.69	1.02	1.43	2.29
462325	8.76	3.83	1.92	0.60	1.72	5.27	1.93	2.29
132911	52.56	22.96	3.65	1.43	4.04	0.88	1.45	2.29
827168	6.51	2.85	2.17	0.93	6.04	1.22	1.08	2.29
1070015	3.26	1.43	0.69	2.05	0.53	3.30	4.86	2.28
293243	13.17	5.84	3.23	1.48	4.46	0.69	1.43	2.26
743211	3.84	1.71	1.36	1.66	5.64	1.28	1.27	2.24
259462	3.69	1.65	0.66	0.89	0.75	8.24	0.65	2.24
291345	70.40	31.69	5.27	1.32	2.52	0.90	1.10	2.22
281191	7.36	3.32	3.42	1.94	3.36	0.84	1.52	2.22
362080	3.81	1.72	1.00	0.91	4.67	3.13	1.35	2.21
825058	3.42	1.55	2.14	0.93	6.34	1.08	0.54	2.21
290841	6.35	2.89	3.60	3.33	1.43	1.62	1.02	2.20
291057	1.34	0.61	1.18	1.53	3.04	4.12	1.04	2.18
855624	17.75	8.17	0.67	0.78	0.54	0.73	8.15	2.17
50344	0.85	0.39	0.80	0.85	0.73	7.58	0.85	2.16
1056172	10.33	4.78	2.40	1.52	0.48	5.66	0.74	2.16
1056203	1.92	0.89	1.05	0.95	1.43	6.28	1.07	2.15
786609	4.81	2.23	0.54	0.55	1.98	7.08	0.62	2.15
248261	1.51	0.70	3.67	1.05	0.77	0.89	4.36	2.15
429047	3.17	1.48	1.32	2.03	3.22	1.07	3.04	2.14
744933	2.15	1.01	0.80	0.91	0.71	7.21	1.06	2.14
461955	1.94	0.91	3.10	3.01	1.55	1.32	1.68	2.13
81484	10.87	5.15	1.73	3.05	2.09	0.66	3.02	2.11
897547	15.69	7.46	3.48	3.41	2.18	0.69	0.75	2.10
796366	34.94	17.03	3.14	1.59	3.66	0.93	0.94	2.05
141336	2.12	1.03	0.73	0.85	7.18	0.60	0.88	2.05
1291658	2.05	1.00	3.72	1.14	3.32	0.94	1.12	2.05
841302	7.41	3.64	1.25	1.26	5.92	0.84	0.91	2.04
627688	7.37	3.62	1.23	1.30	5.58	1.43	0.63	2.03
811097	2.59	1.28	5.58	1.38	0.73	1.83	0.60	2.02
361943	2.86	1.43	1.03	1.71	5.64	0.71	0.95	2.01
75059	21.82	10.94	3.07	1.03	1.07	3.28	1.53	2.00
282895	3.91	1.96	1.06	1.07	6.06	0.92	0.83	1.99
1492967	3.68	1.85	1.76	1.20	5.34	0.93	0.72	1.99
22600	0.36	0.18	1.38	5.49	0.87	1.20	1.00	1.99
119851	6.52	3.28	4.42	3.58	0.65	0.63	0.64	1.98
784285	3.99	2.02	3.44	1.06	3.08	1.24	1.07	1.98
140792	1.66	0.85	1.20	1.05	5.74	0.76	1.05	1.96



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Table 1-2

704076	5.70	2.95		1.04	3.20	3.25	0.88	1.93
142326	1.49	0.78	5.18	1.78	0.80	0.91	0.92	1.92
840944	79.86	42.51	3.82	0.54	4.16	0.61	0.27	1.88
377672	2.59	1.39	0.54	0.57	0.40	7.29	0.56	1.87
431597	5.45	2.95	1.55	0.82	5.32	0.67	0.90	1.85
32381	2.18	1.18	0.60	0.99	3.26	1.10	3.29	1.85
471641	4.79	2.74	0.55	3.60	0.72	3.36	0.52	1.75
753794	1.65	0.94	0.66	1.32	0.68	5.31	0.78	1.75
950464	9.75	5.67	1.05	0.71	5.37	0.77	0.68	1.72
289832	6.67	4.11	1.15	0.75	5.01	0.74	0.48	1.62
309864	2.49	1.62	5.57	0.48	0.62	0.55	0.47	1.54
1492202	2.60	1.98	0.42	0.35	0.43	0.34	5.02	1.31

Table 1-3

Clone	GenBank Acc No.	Aver. of Tumors	Aver. of No. of Cells	Aver. of BPH	Tumor/ Normal	Tumor/ BPH	T/N 5X, >1	T/N 3X, >2/5	T/BPH 5X, >1/5	T/BPH 3X, >2/5
788180	AA453562	25.18	0.81	0.50	31.24	50.69	+	+	+	+
646037	AA196979	24.42	1.02	0.75	23.91	32.70	+	+	+	+
1034473	AA779728	33.61	1.51	1.35	22.27	24.97	+	+	+	+
281003	N50880	128.77	6.30	4.90	20.43	26.26	+	+	+	+
308682	W25202	8.99	0.87	0.27	10.37	32.91	+	+	+	+
281039	N47717	14.05	0.94	0.90	14.99	15.57	+	+	+	+
284701	N64840	33.05	7.05	1.52	4.68	21.68	+	+	+	+
823940	AA490213	22.39	1.32	2.83	16.99	7.91	+	+	+	+
42415	R60981	6.86	0.51	0.72	13.52	9.49	+	+	+	+
46166	H09076	13.13	0.93	1.71	14.12	7.68	+	+	+	+
784168	AA432103	53.04	7.37	3.83	7.20	13.84	+	+	+	+
773479	AA427899	12.32	0.65	5.99	18.85	2.05	+	+	-	-
222157	H85806	8.80	1.02	0.72	8.67	12.14	+	+	+	+
486035	AA043109	24.75	3.47	1.86	7.13	13.32	+	+	+	+
450049	AA703396	18.37	1.83	1.80	10.05	10.21	+	+	+	+
66336	T66832	1.67	0.63	0.10	2.63	16.70	-	+	+	+
35058	R45192	15.59	1.89	1.44	8.24	10.81	+	+	+	+
26736	R39891	9.52	3.36	0.62	2.83	15.37	+	+	+	+
593185	AA159714	28.06	5.61	2.29	5.00	12.23	+	+	+	+
32160	R43432	26.80	3.59	2.77	7.47	9.69	+	+	+	+
814053	AA465495	14.66	1.70	1.75	8.61	8.38	+	+	+	+
292515	N68465	16.22	2.86	1.56	5.67	10.38	+	+	+	+
730739	AA436097	36.49	7.10	3.45	5.14	10.57	+	+	+	+
282089	N48259	11.18	1.51	1.41	7.41	7.92	+	+	+	+
283312	N54763	63.94	6.63	12.14	9.65	5.27	+	+	+	+
291255	N72215	15.20	1.35	4.65	11.29	3.27	+	+	+	+
1048810	AA621342	20.15	3.04	2.59	6.63	7.78	+	+	+	+
197525	H52119	9.52	1.85	1.06	5.16	9.01	+	+	+	+
67401	T49326	1.47	0.20	0.23	7.28	6.27	+	-	+	-
490178	AA121266	24.55	5.63	2.73	4.36	8.99	+	-	+	+
1556526	AA935560	0.88	0.15	0.12	5.96	7.33	+	-	+	-
746152	AA419486	9.35	2.23	1.07	4.18	8.70	+	+	+	+
1034738	AA780190	22.40	3.90	3.28	5.74	6.82	+	+	+	+
259374	N31952	10.51	2.33	1.31	4.50	8.04	+	+	+	+
757435	AA437224	365.78	59.86	58.35	6.11	6.27	+	+	+	+
754280	AA479284	23.83	3.20	4.92	7.46	4.85	+	+	+	+
877835	AA625634	23.06	4.34	3.34	5.32	6.90	+	+	+	+
712950	AA282272	11.53	3.21	1.34	3.59	8.58	+	+	+	+
50772	H16803	18.10	6.74	1.91	2.68	9.47	+	-	+	+
1636908	AI000271	6.58	4.38	0.63	1.50	10.44	-	-	+	+
432194	AA679414	10.34	1.11	4.04	9.35	2.56	+	+	-	+
488964	AA047260	7.77	2.13	0.96	3.64	8.08	+	-	+	+
1412481	AA845156	8.41	3.50	0.90	2.40	9.31	+	-	+	-
283173	N45236	17.85	3.97	2.47	4.49	7.21	+	+	+	+
811867	AA454963	24.57	2.97	7.43	8.28	3.30	+	+	-	+
26519	R20669	36.05	19.25	3.76	1.87	9.59	-	-	+	+
687297	AA235224	12.18	3.12	1.63	3.90	7.48	-	+	+	+
666334	AA232249	1.64	1.54	0.16	1.07	10.14	-	-	+	+
1468260	AA884926	4.53	1.13	0.65	4.03	6.96	+	+	+	+
258300	N30680	18.15	4.53	2.65	4.01	6.86	+	+	+	+
971279	AA682905	54.34	6.63	22.20	8.20	2.45	+	+	-	-
1610448	AA991856	135.55	57.06	16.44	2.38	8.25	-	-	+	+

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461522	AA705237	1.21	0.14	1.87	8.74	-	-	+	+
868282	AA633957	8.99	1.47	4.48	6.12	+	+	+	+
280217	N47941	20.52	5.86	2.89	3.50	+	+	+	+
240694	H78135	4.53	0.90	0.83	5.01	+	+	+	+
321706	W35398	7.80	1.86	1.25	4.20	+	+	+	+
770066	AA430545	11.43	2.60	1.93	4.40	+	+	+	+
811603	AI732784	19.62	2.74	6.22	7.16	+	+	-	+
51773	H23211	11.48	2.40	2.09	4.77	+	+	+	+
66317	T66815	5.50	1.76	0.78	3.13	+	+	+	+
35626	R45292	9.42	1.09	6.51	8.67	+	+	-	-
450307	AA682851	9.39	1.62	2.25	5.80	+	+	+	+
447715	AA702781	14.83	7.21	1.88	2.06	-	-	+	+
731290	AA416843	11.60	4.56	1.57	2.54	+	-	+	+
825857	AA504783	4.27	2.51	0.52	1.70	-	-	+	+
565235	AA136125	35.83	12.59	5.15	2.85	+	+	+	+
756600	AA481464	47.06	7.13	14.79	6.60	+	+	-	+
293635	N63807	26.47	3.44	12.94	7.69	+	+	-	-
757392	AA426110	0.86	0.37	0.12	2.32	-	-	+	+
595695	AA173189	3.58	2.33	0.44	1.54	-	-	+	+
151055	H02230	27.32	7.51	4.62	3.64	+	+	+	+
297439	W03687	48.60	11.33	9.26	4.29	+	+	+	+
838366	AA457172	11.15	1.82	3.27	6.12	+	+	-	+
460279	AA677629	0.87	0.46	0.11	1.87	-	-	+	+
595297	AA173598	3.07	2.45	0.38	1.25	-	-	+	+
1631713	AI025015	5.68	0.93	1.77	6.13	+	+	-	+
564801	AA129551	12.35	3.96	1.99	3.12	+	-	+	+
293651	N69653	13.35	1.84	6.56	7.26	+	+	-	-
745347	AA625666	2.15	0.29	1.14	7.39	+	+	-	-
772304	AA404486	113.14	18.10	38.24	6.25	+	+	-	+
262053	N25030	10.75	5.15	1.52	2.09	-	-	+	+
81331	T60075	2.84	0.78	0.51	3.63	+	-	+	+
840894	AA482340	34.81	11.87	5.66	2.93	-	+	+	+
839081	AA488732	16.60	5.37	2.78	3.09	+	+	+	+
417908	W90519	12.10	2.57	2.82	4.71	+	+	+	+
796366	AA459761	34.94	17.03	5.05	2.05	-	+	+	+
359661	AA011095	26.24	8.79	4.39	2.99	-	+	+	+
50188	H17943	10.75	2.29	2.53	4.69	+	+	-	+
84955	T74846	5.26	1.01	1.43	5.21	+	+	+	+
159608	H16152	14.43	4.14	2.69	3.49	+	+	+	+
1390584	AA843592	6.54	1.91	1.21	3.42	+	+	+	+
825736	AA504842	0.92	0.60	0.13	1.54	-	-	+	+
22161	T66154	20.24	13.40	2.80	1.51	-	-	+	+
787938	AA452278	5.09	1.27	1.08	4.01	+	+	+	+
809603	AA442991	49.03	6.94	29.52	7.06	+	+	-	-
826109	AA521327	0.75	0.54	0.10	1.38	-	-	+	+
884606	AA630006	33.46	13.42	5.43	2.49	+	-	+	+
825822	AA491370	14.07	9.48	1.97	1.48	-	-	+	+
531028	AA070495	21.14	3.89	6.62	5.44	+	+	-	+
814017	AA455668	86.17	23.42	17.57	3.68	+	+	+	+
814062	AA465338	0.81	0.47	0.12	1.72	-	-	+	+
826103	AA521416	1.31	0.82	0.19	1.61	-	-	+	+
461670	AA779919	8.90	1.72	2.71	5.19	+	+	-	+
415700	W85697	3.36	0.61	1.15	5.53	+	+	-	+
815163	AA481144	1.20	0.57	0.19	2.09	-	-	+	+

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810558	AA464568	14.49	4.01	4.83	3.61	+	+	+	+
810220	AA464689	2.17	0.77	5.60	2.82	+	+	-	+
359781	AA010932	7.82	2.50	1.49	3.13	+	+	+	+
795265	AA451807	4.58	1.26	0.97	3.63	+	-	+	+
840306	AA485333	2.49	1.26	0.39	1.97	-	-	+	+
212165	H68845	41.96	8.42	12.58	4.99	+	+	+	+
138444	R68272	4.04	1.00	0.95	4.06	+	+	+	+
824723	AA488986	14.11	4.37	2.84	3.23	+	+	+	+
186918	H43317	3.04	1.10	0.56	2.76	+	-	+	+
191904	H38880	7.67	1.44	2.75	5.32	+	+	-	+
1630990	AI018613	20.64	7.84	3.79	2.63	-	+	+	+
950688	AA608567	52.65	11.99	14.32	4.39	+	+	+	+
771317	AA476234	9.44	1.78	3.46	5.31	+	+	-	-
826072	AA521394	1.20	0.83	0.18	1.44	-	-	+	+
30428	R42061	4.29	0.99	1.16	4.35	+	+	+	+
1056172	AA620995	10.33	4.78	1.77	2.16	+	-	+	+
251806	H96647	2.94	1.83	0.46	1.60	-	-	+	+
305538	N89861	11.44	3.31	2.54	3.46	-	+	+	+
52933	H29315	3.59	1.99	0.58	1.80	-	-	+	+
587415	AI733857	12.98	3.44	3.12	3.77	+	+	+	+
824510	AA490522	1.38	1.09	0.21	1.27	-	-	+	+
416436	W86823	11.08	2.37	3.42	4.67	+	+	+	+
321470	W44889	7.74	1.68	2.36	4.61	+	+	-	+
842925	AA486444	4.61	1.21	1.13	3.79	-	+	-	+
859228	AA666366	85.06	37.74	15.20	2.25	-	-	+	+
845363	AA644092	29.59	7.07	8.08	4.18	+	+	+	+
362755	AA018675	16.82	3.11	6.91	5.41	+	+	-	-
253132	H89036	1.40	1.21	0.21	1.16	-	-	+	+
233419	H77706	5.55	1.14	1.90	4.87	+	+	-	+
1592006	AA953229	5.30	1.51	1.24	3.52	-	+	-	+
950778	AA608636	3.00	1.87	0.48	1.60	-	-	+	+
951313	AA620591	6.84	6.68	1.01	1.03	-	-	+	+
358850	W94647	21.29	5.98	5.06	3.56	+	+	+	+
771048	AA427395	10.54	2.90	2.58	3.63	-	+	+	+
840944	AA486533	79.86	42.51	13.69	1.88	-	+	+	+
268211	N36327	3.43	0.70	1.23	4.93	+	+	+	-
840606	AA487914	15.85	7.18	2.88	2.21	-	-	+	+
796161	AA461092	30.31	5.27	15.52	5.75	+	+	-	-
266106	N21624	20.68	4.53	6.63	4.57	+	+	+	+
811582	AA458516	10.13	5.34	1.75	1.90	-	-	+	+
741067	AA402352	64.30	16.50	17.00	3.90	+	+	+	+
214006	H70775	4.67	1.55	1.00	3.02	+	+	+	+
449112	AA777488	42.54	7.72	19.71	5.51	+	+	-	-
150262	H01129	13.66	3.31	3.87	4.12	+	+	-	+
289891	N77134	7.82	1.84	2.30	4.25	+	+	+	+
488431	AA047441	10.48	3.68	2.19	2.85	-	+	+	+
788655	AA449837	7.66	2.78	1.58	2.76	-	+	+	+
208082	H62563	7.90	1.98	2.19	3.99	+	+	+	+
745503	AA625995	42.62	11.14	11.32	3.83	+	+	+	+
509731	AA045699	39.41	23.94	6.63	1.65	-	-	+	+
565863	AA136386	3.93	2.97	0.63	1.32	-	-	+	+
509887	AA054701	39.47	7.39	17.54	5.34	+	+	-	-
796646	AA461467	6.21	4.35	1.01	1.43	-	-	+	+
814235	AA465598	12.37	6.41	2.19	1.93	-	-	+	+

Table 1-3

53022	R15880	1.34	0.00	0.24	1.90	5.63	-	-	+	+
377246	AA055306	12.60	3.02	3.78	4.17	3.34	+	+	+	-
814662	AA481045	1.12	0.67	0.19	1.67	5.84	-	-	+	+
45327	H08548	8.18	2.30	2.08	3.56	3.94	-	+	+	+
51700	H22853	3.66	1.21	0.82	3.02	4.47	-	+	+	+
80050	T63893	8.15	3.84	1.52	2.12	5.35	-	-	+	+
594994	AA172372	14.61	10.98	2.38	1.33	6.14	-	-	+	+
795907	AA460346	5.39	1.25	1.71	4.31	3.15	+	+	+	+
824126	AA490611	0.59	0.37	0.10	1.58	5.87	-	-	+	+
511952	AA100674	225.66	92.92	45.17	2.43	5.00	+	-	+	+
823615	AA496957	9.40	3.54	1.97	2.65	4.76	+	+	+	+
784130	AA432075	17.23	6.93	3.50	2.49	4.93	-	-	+	+
1535596	AA918370	401.67	285.67	66.91	1.41	6.00	-	-	+	+
1605407	AA988746	9.00	4.61	1.65	1.95	5.45	-	-	+	+
1606837	AA996028	23.76	9.09	4.98	2.61	4.77	-	+	+	+
768395	AA495819	14.29	3.54	4.28	4.03	3.34	+	+	-	+
796239	AA460675	26.07	23.22	4.18	1.12	6.24	-	-	+	+
49302	H15675	4.88	0.86	2.90	5.68	1.68	+	+	-	-
754358	AA436142	12.77	7.46	2.26	1.71	5.64	-	-	+	+
207029	R98842	81.88	14.79	45.41	5.54	1.80	+	+	-	-
838285	AA458747	1.34	1.36	0.21	0.99	6.35	-	-	+	+
1636108	AI015679	3.58	1.45	0.74	2.47	4.85	-	-	+	+
796754	AA460719	0.66	0.83	0.10	0.80	6.50	-	-	+	+
238821	H65029	6.54	2.22	1.50	2.94	4.35	+	+	+	+
129024	R10378	4.30	1.04	1.36	4.13	3.16	+	+	+	+
771053	AA430718	16.14	6.63	3.34	2.43	4.83	-	-	+	+
289071	N63609	37.48	15.32	7.78	2.45	4.82	+	-	+	+
1637282	AI005515	4.01	2.58	0.70	1.55	5.71	-	-	+	+
263697	H99672	4.23	0.93	1.58	4.57	2.68	+	+	-	+
971367	AA683050	35.22	12.06	8.15	2.92	4.32	+	+	+	+
32381	R43452	2.18	1.18	0.41	1.85	5.38	-	+	+	+
586780	AA130677	1.92	1.75	0.31	1.10	6.12	-	-	+	+
815036	AA465148	1.62	0.58	0.37	2.81	4.40	-	+	+	+
383185	AA074258	12.04	3.46	3.22	3.48	3.73	+	+	+	+
416374	W86202	4.49	2.66	0.81	1.69	5.52	-	-	+	+
781366	AA448402	12.06	3.84	2.97	3.14	4.05	+	+	+	+
213682	H71713	13.07	4.10	3.27	3.19	3.99	+	+	+	+
1467207	AA884713	3.68	0.99	1.07	3.72	3.44	-	+	-	+
375682	AA032221	31.04	12.66	6.60	2.45	4.70	-	-	+	+
510576	AA055880	132.22	56.58	27.52	2.34	4.81	-	-	+	+
242952	H95712	16.94	4.39	5.16	3.86	3.28	-	+	-	+
878127	AA775422	3.53	0.87	1.16	4.07	3.05	+	+	-	+
853968	AI791173	12.10	2.86	4.21	4.23	2.87	+	+	+	+
287728	N75893	2.76	0.70	0.89	3.97	3.10	+	+	+	+
842927	AA486445	4.24	3.59	0.72	1.18	5.88	-	-	+	+
897042	AA676765	4.95	1.36	1.45	3.63	3.42	+	+	+	+
878281	AA670286	6.80	3.30	1.37	2.06	4.97	-	-	+	+
359701	AA011176	5.21	2.32	1.09	2.25	4.78	-	-	+	+
272750	N36233	20.57	6.04	5.70	3.40	3.61	+	+	+	+
823819	AA490390	11.96	3.51	3.34	3.41	3.58	-	+	-	+
897807	AA598531	5.08	2.77	0.98	1.83	5.16	-	-	+	+
855749	AA663983	50.50	12.03	18.24	4.20	2.77	+	+	-	-
264895	N21170	7.86	1.63	3.70	4.82	2.12	+	+	-	-
825207	AA504120	11.96	2.92	4.19	4.09	2.86	+	+	-	-

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461476	AA705041	0.78	0.14	1.28	5.64	-	-	+	+
323474	W45623	1.25	0.32	0.41	3.87	3.06	+	+	+
744846	AA625675	2.69	0.70	0.87	3.83	3.10	+	+	+
741474	AA401111	4.93	1.40	1.45	3.51	3.40	+	+	+
506564	AA709044	12.93	4.03	3.49	3.21	3.70	-	+	+
449275	AA777705	3.81	0.83	1.64	4.58	2.32	+	+	+
878544	AA775863	19.20	6.78	4.73	2.83	4.06	+	+	+
755239	AA422139	17.93	9.29	3.62	1.93	4.95	-	-	+
259973	N47829	1.66	1.95	0.28	0.85	5.99	-	-	+
290370	N62301	0.62	0.48	0.11	1.30	5.53	-	-	+
773287	AA425534	15.94	8.17	3.27	1.95	4.87	-	-	+
753252	AA406505	7.78	2.14	2.45	3.63	3.18	-	+	-
290841	N99711	6.35	2.89	1.38	2.20	4.61	-	+	+
50606	H17763	14.94	6.00	3.47	2.49	4.31	-	-	+
1472689	AA873159	5.15	1.21	2.03	4.26	2.53	+	+	+
252314	H87175	0.69	0.62	0.12	1.11	5.66	-	-	+
813275	AA455940	1.75	0.86	0.37	2.04	4.73	-	-	+
951125	AA620556	18.86	7.00	4.63	2.69	4.07	+	-	+
454317	AA677165	20.56	33.95	3.34	0.61	6.16	-	-	+
433253	AA699427	7.29	2.43	1.95	3.00	3.74	+	+	+
1585549	AA976714	6.44	3.55	1.31	1.81	4.92	-	-	+
491764	AA150502	0.81	0.59	0.15	1.36	5.37	-	-	+
587595	AA133044	559.22	179.15	155.61	3.12	3.59	+	+	+
245547	N55167	5.86	1.63	1.88	3.59	3.12	+	+	+
200599	H48472	13.42	5.61	3.11	2.39	4.32	-	+	+
139771	R62352	7.72	6.17	1.42	1.25	5.44	-	-	+
462097	AA705376	8.32	6.33	1.55	1.31	5.38	-	-	+
810571	AA464580	4.37	1.58	1.11	2.76	3.92	-	+	+
279482	N48804	8.66	3.25	2.16	2.67	4.00	+	-	+
127396	R08658	14.07	5.12	3.61	2.75	3.90	-	+	+
824122	AA490609	4.64	2.75	0.94	1.69	4.95	-	-	+
1031583	AA609323	38.01	9.06	15.59	4.20	2.44	+	+	+
700900	AA287375	9.94	3.00	3.00	3.31	3.31	-	+	-
250869	N23605	123.92	32.54	44.10	3.81	2.81	+	-	+
1631747	AI025120	5.09	1.33	1.84	3.84	2.77	+	+	+
896914	AA779391	18.03	7.40	4.35	2.44	4.14	-	+	+
743452	AA609368	7.90	4.94	1.59	1.60	4.98	-	-	+
81578	T65844	12.77	4.82	3.25	2.65	3.93	-	+	+
837904	AA434360	103.13	30.63	32.18	3.37	3.20	+	+	+
1030855	AA621761	14.86	3.64	5.98	4.08	2.48	+	+	-
814306	AA459100	18.28	10.68	3.77	1.71	4.85	-	-	+
77915	T61271	14.99	17.48	2.63	0.86	5.70	-	-	+
260116	N32044	0.88	0.86	0.16	1.03	5.52	-	-	+
811953	AA458551	17.84	5.98	5.02	2.98	3.55	-	+	-
210405	H65395	34.02	7.84	15.49	4.34	2.20	+	+	-
124824	R01139	30.85	11.28	8.13	2.73	3.79	+	-	+
593929	AA169379	17.74	7.51	4.26	2.36	4.17	+	+	+
703943	AA278473	4.77	2.81	0.99	1.70	4.82	-	-	+
487733	AA058818	15.01	6.81	3.48	2.20	4.32	-	-	+
191603	H38210	22.14	4.64	12.72	4.77	1.74	+	+	-
360885	AA012866	40.29	13.93	11.17	2.89	3.61	-	+	+
824267	AA491265	0.74	0.41	0.16	1.81	4.68	-	-	+
624271	AA181179	5.74	2.03	1.58	2.82	3.64	+	+	+
1500000	AA885642	6.11	3.34	1.32	1.83	4.63	-	-	+

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813973	AA455689	3.24	3	1.18	3.70	2.75	-	+	-	-
825297	AA504536	0.96	0.65	0.19	1.48	4.97	-	-	+	+
592403	AA159497	0.46	0.16	0.13	2.95	3.50	+	-	+	+
838807	AA457681	1.90	2.58	0.33	0.74	5.71	-	-	+	+
845352	AA644080	13.36	5.39	3.37	2.48	3.97	-	-	+	+
814798	AA465614	32.86	15.63	7.58	2.10	4.34	-	-	+	+
1607765	AA989473	3.96	1.73	0.96	2.29	4.14	-	-	+	+
1035765	AA629117	6.21	2.41	1.61	2.57	3.86	+	+	+	+
824739	AA488784	2.63	1.02	0.68	2.57	3.86	-	-	+	+
290642	N99659	7.76	2.56	2.28	3.02	3.40	-	+	-	+
121489	T97303	34.70	10.55	11.09	3.29	3.13	-	+	-	+
823691	AA489647	7.42	4.65	1.54	1.59	4.82	-	-	+	+
86160	T72336	2.10	0.74	0.59	2.82	3.58	-	+	-	+
1456160	AA862465	41.61	40.32	7.76	1.03	5.36	-	-	+	+
897767	AA598470	2.07	0.49	0.98	4.25	2.12	+	+	-	-
877641	AA488238	67.93	15.10	36.21	4.50	1.88	+	+	-	-
504544	AA149096	12.31	4.73	3.28	2.60	3.76	+	-	+	+
1466631	AA883679	1.21	0.71	0.26	1.71	4.63	-	-	+	+
898109	AA598483	6.77	3.15	1.62	2.15	4.19	-	-	+	+
280763	N50563	0.53	0.50	0.10	1.05	5.28	-	-	+	+
1492238	AA875936	13.96	4.83	4.08	2.89	3.43	-	+	-	+
194364	H50770	5.44	1.19	3.10	4.56	1.76	+	+	-	-
462468	AA699895	3.24	0.96	1.10	3.36	2.96	-	+	-	+
768643	AA430351	41.57	23.92	9.10	1.74	4.57	-	-	+	+
29063	R40970	3.34	1.66	0.78	2.01	4.29	-	-	+	+
610124	AA171459	1.70	1.73	0.32	0.98	5.32	-	-	+	+
26617	R39862	4.62	2.68	1.01	1.73	4.56	-	-	+	+
487499	AA045115	4.41	1.79	1.16	2.47	3.82	+	-	+	+
1631849	AI004315	25.01	12.24	5.91	2.04	4.24	-	-	+	+
204111	H55907	3.38	0.87	1.40	3.86	2.42	+	+	-	-
781454	AA432312	9.75	3.24	2.99	3.01	3.26	+	-	+	-
491184	AA137144	6.35	1.83	2.27	3.47	2.80	+	+	+	+
840788	AA486145	23.03	5.46	11.26	4.22	2.05	+	+	-	-
547058	AA082943	9.57	4.00	2.48	2.39	3.86	-	-	-	+
784253	AA446906	11.76	3.47	4.12	3.39	2.85	-	+	-	+
196189	R91950	11.19	4.82	2.86	2.32	3.91	-	-	-	+
47542	H16454	8.07	1.88	4.18	4.30	1.93	+	+	-	-
47384	H10778	4.22	1.17	1.61	3.61	2.62	-	+	-	-
824237	AA491249	74.89	31.45	19.54	2.38	3.83	-	-	+	+
194723	R89849	5.22	3.86	1.07	1.35	4.86	-	-	+	+
150314	H01205	5.29	2.31	1.35	2.29	3.92	-	-	+	+
842784	AA486200	326.54	118.59	94.88	2.75	3.44	+	+	+	+
48286	H12190	2.34	0.61	0.99	3.83	2.36	-	+	-	-
454771	AA677287	2.69	0.70	1.13	3.82	2.38	+	+	-	-
24208	R38412	7.49	3.51	1.85	2.13	4.05	-	-	+	+
273546	N33274	9.10	3.09	2.81	2.95	3.23	-	+	-	+
267419	N24973	0.97	0.96	0.19	1.01	5.16	-	-	+	+
731410	AA412250	0.53	0.58	0.10	0.92	5.24	-	-	+	+
1589973	AA977296	5.17	1.57	1.81	3.30	2.85	+	+	-	+
825668	AA505063	2.26	0.96	0.60	2.36	3.77	-	-	-	+
262864	N24437	36.97	16.43	9.52	2.25	3.88	-	-	+	+
1055201	AA626146	30.25	19.90	6.55	1.52	4.62	-	-	+	+
869450	AA680244	51.58	35.87	10.98	1.44	4.70	-	-	+	+
37980	R61372	0.84	0.29	0.27	2.96	3.18	+	-	+	-

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124252	R02439	6.06	4	1.25	1.28	4.85	-	-	+	+
238661	H81543	2.74	2.18	0.56	1.26	4.86	-	-	+	+
593658	AA160080	1.08	1.02	0.21	1.07	5.04	-	-	+	+
785616	AA449004	11.47	3.12	4.70	3.67	2.44	-	+	-	-
84022	T70901	6.97	2.71	1.97	2.57	3.54	-	-	+	+
511632	AA126951	7.85	2.71	2.46	2.89	3.20	-	+	-	+
34134	R44734	2.73	1.33	0.68	2.06	4.03	-	-	+	+
39885	R52543	0.94	0.30	0.31	3.11	2.98	-	+	-	+
840590	AA488014	21.70	7.54	6.78	2.88	3.20	+	-	+	-
49710	H28973	3.21	1.47	0.82	2.18	3.89	-	-	-	+
42803	R60014	2.96	0.81	1.23	3.66	2.41	+	+	+	-
134969	R31789	6.81	4.59	1.48	1.48	4.58	-	-	+	+
75415	T57609	51.71	24.46	13.09	2.11	3.95	-	-	-	+
843094	AA488626	49.18	13.00	21.59	3.78	2.28	-	+	-	-
137189	R36409	5.26	1.96	1.56	2.68	3.37	-	+	-	+
45578	H08016	5.05	1.63	1.72	3.10	2.94	-	+	-	+
430465	AA680186	5.55	1.53	2.30	3.62	2.41	+	-	+	-
67654	T49539	15.79	6.24	4.50	2.53	3.51	-	-	+	+
550141	AA102591	78.20	22.40	30.93	3.49	2.53	+	+	-	-
796351	AA459765	2.34	1.80	0.50	1.30	4.72	-	-	+	+
1637296	AI005519	25.52	13.27	6.23	1.92	4.09	-	-	+	+
549101	AA083485	12.81	2.43	17.02	5.26	0.75	+	+	-	-
824376	AA489696	0.49	0.34	0.11	1.42	4.58	-	-	+	+
773204	AA425692	21.34	15.28	4.63	1.40	4.61	-	-	+	+
453599	AA679569	4.23	2.23	1.03	1.89	4.10	-	-	+	+
815230	AA481256	9.59	4.44	2.50	2.16	3.84	-	-	+	+
196650	R93237	10.93	6.59	2.52	1.66	4.33	-	-	+	+
725489	AA398521	26.71	9.34	8.54	2.86	3.13	-	+	-	+
1475987	AA872436	2.96	0.83	1.23	3.58	2.40	+	+	-	-
811162	AA485748	6.36	4.30	1.41	1.48	4.50	-	-	+	+
366132	AA062805	6.22	1.68	2.75	3.72	2.26	-	+	-	-
701677	AA287067	16.03	15.09	3.27	1.06	4.91	-	-	+	+
757462	AA442301	12.77	6.52	3.19	1.96	4.01	-	-	-	+
1240220	AA788970	7.60	2.71	2.40	2.80	3.17	+	+	+	+
210862	H65659	2.56	1.16	0.68	2.21	3.76	-	-	+	+
530185	AA083671	8.46	7.83	1.73	1.08	4.88	-	-	+	+
773248	AA425773	21.90	19.94	4.51	1.10	4.86	-	-	+	+
772416	AA405597	1.03	1.35	0.20	0.76	5.19	-	-	+	+
796513	AA460251	17.83	7.09	5.20	2.51	3.43	-	+	+	+
66902	T67444	3.21	1.14	1.03	2.82	3.12	+	+	+	+
825718	AA505162	4.03	1.32	1.40	3.06	2.88	-	+	-	+
201282	R99503	6.42	4.16	1.46	1.55	4.39	-	-	+	+
1604342	AA987644	1.97	0.81	0.57	2.45	3.48	+	-	+	+
362926	AA018979	4.39	2.04	1.16	2.15	3.77	-	-	+	+
1456721	AA864875	12.82	5.49	3.58	2.33	3.58	-	-	-	+
1070015	AA599717	3.26	1.43	0.90	2.28	3.63	-	+	+	+
109153	T81140	5.46	1.70	2.03	3.20	2.69	-	+	-	-
50764	H17363	0.43	0.23	0.11	1.89	4.00	-	-	+	+
356992	W92964	21.95	7.93	7.04	2.77	3.12	-	+	-	+
1635874	AA996104	6.06	2.17	1.97	2.79	3.07	+	-	+	+
824843	AA488865	4.03	2.24	0.99	1.80	4.06	-	-	+	+
259462	N29545	3.69	1.65	1.02	2.24	3.62	+	-	+	-
773208	AA425205	26.40	17.78	6.05	1.49	4.37	-	-	+	+
626990	AA190850	7.39	3.82	1.89	1.93	3.91	-	-	+	+



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743749	AA634291	5.10	1.86	3.10	2.74	-	+	-	-
79000	T62164	6.24	1.54	1.77	4.05	-	-	+	+
23576	T77385	3.58	1.59	1.00	2.25	-	-	-	+
366815	AA029490	71.61	18.49	36.97	3.87	+	-	+	-
731016	AA421256	0.85	1.00	0.17	0.85	-	-	+	+
415437	W81124	3.52	1.02	1.50	3.46	-	+	-	-
197779	R93515	8.61	6.61	1.91	1.30	-	-	+	+
1519515	AA902831	0.85	0.55	0.20	1.55	-	-	+	+
511428	AA126009	24.31	24.09	5.08	1.01	-	-	+	+
624785	AA181995	6.17	2.49	1.86	2.47	-	-	-	+
809578	AA456616	24.75	12.84	6.40	1.93	-	-	+	+
360403	AA015658	28.16	15.79	7.03	1.78	-	-	+	+
431286	AA682627	13.81	4.59	4.98	3.01	-	+	-	+
712216	AA280288	0.50	0.30	0.12	1.68	-	-	+	+
296788	W01113	3.27	0.67	3.50	4.85	+	+	-	-
1638852	AI016618	1.21	0.50	0.36	2.41	-	-	-	+
1636868	AI015589	5.07	2.89	1.26	1.76	-	-	+	+
461592	AA705142	11.87	12.89	2.45	0.92	-	-	+	+
357364	W93709	0.72	0.27	0.23	2.67	-	-	+	+
594517	AA169645	24.81	12.50	6.57	1.98	-	-	+	+
842882	AA486412	2.20	1.38	0.53	1.60	-	-	+	+
111812	T84975	5.56	1.89	1.98	2.94	-	+	-	+
757206	AA443969	5.25	4.09	1.17	1.28	-	-	+	+
292042	W02333	9.39	2.67	4.19	3.51	-	+	-	-
743828	AA634379	3.34	1.15	1.17	2.90	+	+	+	+
884657	AA629910	6.68	2.72	2.04	2.46	-	-	-	+
743804	AA634360	5.09	1.90	1.66	2.68	-	-	-	+
362829	AA019445	3.03	1.24	0.92	2.44	-	-	+	+
502690	AA127100	4.09	1.46	1.39	2.80	-	+	-	+
854678	AA630084	6.21	2.55	1.89	2.44	+	-	+	-
626385	AA189113	15.94	8.27	4.20	1.93	-	-	+	+
364022	AA021586	4.15	1.53	1.39	2.72	-	-	+	+
264465	N20522	0.77	0.84	0.16	0.91	-	-	+	+
232628	H72591	4.02	1.27	1.58	3.16	+	+	-	+
950410	AA599064	3.18	0.89	1.49	3.56	+	-	-	-
838761	AA457767	2.59	2.11	0.58	1.23	-	-	+	+
753162	AA400732	2.81	1.76	0.69	1.60	-	-	+	+
610011	AA169192	34.63	11.27	13.23	3.07	-	+	-	+
251330	H97880	9.21	3.78	2.83	2.44	-	+	-	+
823588	AA497127	7.72	2.72	2.70	2.83	-	+	-	+
361048	AA017383	3.13	1.69	0.82	1.85	-	-	+	+
826102	AA521409	4.19	1.51	1.45	2.78	+	-	+	-
877832	AA625628	44.43	13.65	18.48	3.25	-	+	-	-
856447	AA630800	8.81	2.09	6.13	4.22	+	+	-	-
33715	R44078	1.36	0.37	0.71	3.73	-	+	-	-
815549	AA456827	2.30	1.97	0.51	1.17	-	-	+	+
768443	AA495936	26.58	15.35	6.79	1.73	-	-	+	+
1456602	AA864681	6.11	2.54	1.88	2.40	-	-	-	+
745103	AA626365	8.87	3.33	2.98	2.67	-	+	-	+
784258	AA447018	10.08	2.77	5.04	3.64	+	+	-	-
950836	AA608679	34.79	13.60	11.31	2.56	+	-	+	-
609052	AA176607	0.87	0.87	0.19	0.99	-	-	+	+
1637343	AI015359	5.03	4.49	1.12	1.12	-	-	+	+
462325	AA705516	8.76	3.83	2.63	2.29	+	-	+	-

Table 1-3

878284	AA670280	4.41	1.20	1.95	3.66	-	-	+	+
486538	AA042812	7.64	1.86	1.51	4.10	-	-	+	+
878316	AA670296	5.34	1.86	1.95	2.87	-	+	-	+
251019	H97778	45.62	22.03	12.95	2.07	-	-	+	+
258167	N40582	17.24	8.15	4.96	2.12	-	-	+	+
416833	W87312	6.07	2.16	2.18	2.81	-	+	-	+
186768	H51914	9.43	5.75	2.39	1.64	-	-	+	-
1558411	AA976063	8.20	5.56	1.99	1.47	-	-	+	+
49728	H29198	1.27	0.57	0.38	2.22	-	-	-	+
125722	R07506	3.28	1.21	1.14	2.72	-	+	-	+
613237	AA181767	1.07	0.78	0.25	1.37	-	-	+	+
526945	AA112515	1.14	0.40	0.41	2.82	-	+	-	+
79032	T61960	37.58	31.85	8.53	1.18	-	-	+	+
843139	AA485922	39.96	18.13	11.84	2.20	-	-	-	+
841302	AA487213	7.41	3.64	2.09	2.04	+	-	+	-
191978	H38623	47.95	29.72	12.11	1.61	-	-	+	+
135900	R33609	9.44	5.00	2.57	1.89	-	-	+	+
713109	AA282983	2.44	0.98	0.79	2.48	-	-	-	+
626640	AA191512	8.33	4.14	2.35	2.01	-	-	+	+
322914	W45148	9.34	3.68	3.10	2.54	-	-	-	+
251517	H96605	0.73	0.80	0.16	0.91	-	-	+	+
840878	AA482228	25.81	27.85	5.59	0.93	-	-	+	+
626716	AA191245	21.60	13.98	5.41	1.55	-	-	+	+
291345	W02978	70.40	31.69	21.23	2.22	+	-	+	+
80500	T64625	140.81	52.48	49.33	2.68	-	+	+	+
815737	AA485201	3.64	2.20	0.94	1.65	-	-	+	+
436769	AA703079	168.72	131.76	39.68	1.28	-	-	+	+
461509	AA705077	0.62	0.38	0.16	1.66	-	-	+	+
427838	AA001234	4.05	3.19	0.95	1.27	-	-	+	+
137638	R37224	5.06	1.71	1.97	2.95	-	+	-	+
855624	AA664101	17.75	8.17	5.31	2.17	+	-	+	-
109316	T80924	12.35	4.01	5.08	3.08	+	+	+	-
725978	AA399198	4.92	2.96	1.28	1.66	-	-	+	+
392678	AA708342	34.95	10.61	15.79	3.29	-	+	-	-
120707	T95670	19.60	12.65	4.95	1.55	-	-	+	+
841220	AA486723	1.46	1.23	0.34	1.18	-	-	-	+
1631194	AA994757	21.83	14.39	5.47	1.52	-	-	+	+
767798	AA418755	5.70	1.98	2.18	2.88	-	+	-	+
251435	H97989	0.73	0.90	0.16	0.81	-	-	+	+
75044	T51904	3.46	0.93	1.96	3.72	-	+	-	-
743071	AA405984	1.89	1.02	0.52	1.85	-	-	+	+
490766	AA133165	3.48	1.03	1.66	3.38	-	+	-	-
344589	W73144	53.28	21.92	17.55	2.43	-	+	-	+
250673	H95978	2.66	1.12	0.86	2.37	+	-	+	-
785910	AA449644	4.01	1.01	2.72	3.98	+	+	-	-
824329	AA489670	1.94	1.47	0.47	1.32	-	-	+	+
1420790	AA826237	13.40	6.84	3.84	1.96	-	-	-	+
430318	AA010608	10.87	4.02	3.96	2.71	-	+	-	+
45564	H05264	1.66	0.76	0.51	2.17	-	-	+	+
251936	H97488	7.48	2.74	2.76	2.73	-	+	-	-
253314	H89330	1.52	1.34	0.35	1.14	-	-	+	+
490232	AA121428	2.68	0.85	1.17	3.15	-	+	-	-
855244	AA630545	15.78	6.78	5.09	2.33	+	+	+	+
898242	AA598621	10.34	7.74	2.53	1.34	-	-	+	+

Table 1-3

395625	AA757604	14.45	4.73	2.37	3.06	-	-	-	+
767406	AA417911	0.44	0.10	0.98	4.45	-	-	+	+
264640	N27610	13.22	6.10	4.07	2.17	-	-	+	+
1031598	AA609474	5.18	1.34	3.37	3.88	+	+	-	-
785913	AA449657	3.35	0.80	2.75	4.19	+	+	-	-
343987	W70234	11.55	12.13	2.59	0.95	-	-	+	+
141505	R72977	6.38	1.86	3.21	3.42	-	+	-	-
298155	N70794	2.85	1.29	0.89	2.21	-	-	-	+
745283	AA625567	7.94	5.76	1.97	1.38	-	-	-	+
26230	R12449	5.08	2.29	1.60	2.22	-	-	-	+
743851	AA634424	8.22	3.22	2.89	2.55	-	+	-	+
884531	AA629801	7.71	4.73	2.05	1.63	-	-	+	+
345032	W76319	20.78	9.11	6.69	2.28	-	-	-	+
729953	AA412049	4.95	3.66	1.23	1.35	-	-	+	+
815017	AA465258	14.81	9.71	3.84	1.52	-	-	-	+
308466	N95495	9.26	4.85	2.67	1.91	-	-	-	+
773345	AA425442	1.21	1.11	0.28	1.09	-	-	+	+
811766	AA443004	4.93	3.60	1.23	1.37	-	-	+	+
246869	N59119	4.68	1.38	2.37	3.40	-	+	-	-
1473300	AA916323	12.44	4.26	5.09	2.92	+	+	-	-
447518	AA702247	10.98	6.11	3.08	1.80	-	-	-	+
784093	AA446643	6.44	3.83	1.75	1.68	-	-	-	+
293243	N68686	13.17	5.84	4.25	2.26	-	+	+	+
897733	AA598996	5.86	3.56	1.58	1.65	-	-	-	+
755409	AA424706	7.81	2.43	3.67	3.22	-	+	-	-
299723	N75055	2.98	2.09	0.76	1.43	-	-	+	+
461499	AA705072	2.26	2.09	0.53	1.08	-	-	+	+
82905	T69305	1.21	0.48	0.43	2.50	-	+	-	+
824917	AA489121	1.74	1.05	0.47	1.65	-	-	-	+
121436	T97457	6.37	6.46	1.46	0.99	-	-	+	+
950430	AA599078	7.48	3.82	2.21	1.96	-	-	-	+
809657	AA456331	4.72	2.68	1.32	1.76	-	-	+	+
32509	R43053	4.38	3.20	1.10	1.37	-	-	+	+
346889	W79834	0.89	0.21	0.79	4.21	+	+	-	-
145388	R78386	2.66	0.94	1.06	2.83	-	+	-	-
431296	AA682631	1.85	1.07	0.51	1.73	-	-	+	+
46411	H09222	3.07	2.00	0.81	1.54	-	-	+	+
726483	AA399269	3.50	2.68	0.87	1.30	-	-	+	+
823895	AA490490	1.57	1.72	0.36	0.91	-	-	-	+
288695	N59206	3.41	0.88	2.36	3.86	+	+	-	-
753092	AA436595	7.06	3.62	2.10	1.95	-	-	-	+
845345	AA773478	5.09	3.00	1.41	1.70	-	-	-	+
133130	R28397	11.12	4.91	3.67	2.27	-	-	+	+
788541	AA452955	12.11	3.01	9.65	4.03	+	+	-	-
417867	W90224	13.52	9.26	3.54	1.46	-	-	-	+
611150	AA173109	7.99	6.62	1.96	1.21	-	-	+	+
1553306	AA934762	7.92	5.52	2.06	1.43	-	-	-	+
358456	W96107	37.98	23.51	10.38	1.62	-	-	-	+
810510	AA464531	27.71	20.86	7.03	1.33	-	-	-	+
361922	AA001403	9.18	5.49	2.55	1.67	-	-	-	+
51921	H22928	4.48	1.72	1.68	2.60	-	-	+	-
767994	AA418821	4.29	1.83	1.47	2.34	+	-	+	-
754192	AA479133	3.30	1.49	1.08	2.22	-	-	-	+
254310	N81158	10.26	4.39	3.51	2.33	+	-	+	+

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1635110	AA994811	38.13	9	12.62	2.23	3.02	-	-	-	+
121997	T98253	5.10	1.52	2.70	3.36	1.89	+	+	-	-
51011	H19242	4.64	2.46	1.38	1.88	3.36	-	-	+	+
283034	N51280	9.61	3.05	4.60	3.15	2.09	+	+	-	-
564537	AA121732	1.79	1.93	0.42	0.93	4.31	-	-	+	+
82734	T73651	7.21	6.90	1.72	1.05	4.18	-	-	+	+
1631682	AA994801	1.61	0.53	0.74	3.03	2.19	-	+	-	-
290378	N64508	17.10	17.02	4.07	1.00	4.20	-	-	+	+
262865	H99650	30.48	11.78	11.64	2.59	2.62	-	+	-	+
1031698	AA609556	6.26	3.13	1.95	2.00	3.21	-	-	-	+
109200	T81107	3.17	0.93	1.78	3.42	1.79	+	+	-	-
824358	AA489681	0.96	0.68	0.25	1.42	3.78	-	-	+	+
32684	R20424	24.32	17.98	6.32	1.35	3.85	-	-	+	+
240430	H78097	3.52	1.28	1.43	2.74	2.46	+	-	-	-
1475200	AA858390	28.16	22.56	7.13	1.25	3.95	-	-	+	+
731272	AA421073	5.02	2.47	1.59	2.03	3.16	-	-	-	+
245860	N55339	30.36	12.47	11.02	2.43	2.76	-	+	+	+
854874	AA630346	2.22	0.68	1.15	3.26	1.92	+	+	-	-
824124	AA490802	1.03	0.63	0.29	1.63	3.55	-	-	-	+
1435029	AA857212	1.84	0.67	0.75	2.74	2.44	-	+	-	-
951080	AA620446	2.43	1.63	0.66	1.49	3.69	-	-	+	+
22731	R45264	4.46	2.73	1.26	1.64	3.54	-	-	+	+
813637	AA447742	34.08	17.95	10.41	1.90	3.27	-	-	+	+
258521	N40743	3.33	1.39	1.20	2.40	2.77	+	-	+	-
1602619	AA988798	135.32	117.37	33.70	1.15	4.01	-	-	-	+
144926	R78559	9.20	3.96	3.24	2.32	2.84	-	+	-	+
897690	AA598758	15.87	13.03	4.03	1.22	3.94	-	-	+	+
740914	AA478268	7.20	4.16	2.10	1.73	3.42	-	-	+	+
1160558	AA877347	8.03	3.31	2.94	2.43	2.73	-	-	-	+
277660	N49405	14.16	5.37	5.65	2.64	2.51	-	+	-	+
840821	AA486261	17.59	8.78	5.60	2.00	3.14	-	-	-	+
760344	AA426227	5.89	3.00	1.85	1.96	3.18	-	-	-	+
813187	AA456721	22.70	10.74	7.51	2.11	3.02	-	-	-	+
685516	AA262573	3.36	1.79	1.03	1.88	3.26	-	-	-	+
503851	AA130042	18.15	5.54	9.79	3.28	1.85	+	+	-	-
1631762	AI025126	46.32	36.08	12.06	1.28	3.84	-	-	-	+
343167	W67309	15.62	7.28	5.24	2.15	2.98	-	-	-	+
30793	R18258	7.89	2.84	3.37	2.78	2.34	-	+	-	-
82874	T69348	5.14	2.70	1.60	1.90	3.21	-	-	-	+
209167	H63668	3.29	1.15	1.46	2.86	2.25	+	+	+	-
811842	AA443177	9.91	4.54	3.39	2.18	2.92	-	-	-	+
810221	AA464700	3.85	1.37	1.68	2.81	2.30	-	+	-	-
249705	H85464	62.65	37.20	18.34	1.68	3.42	-	-	-	+
178137	H47015	238.41	190.87	61.93	1.25	3.85	-	-	+	+
815800	AA485216	1.22	1.44	0.29	0.84	4.25	-	-	+	+
294259	W01800	4.21	2.21	1.32	1.90	3.19	-	-	+	+
248454	N59626	3.70	1.95	1.16	1.89	3.19	-	-	+	-
504290	AA151796	50.88	17.89	22.72	2.84	2.24	+	-	+	-
731257	AA416833	4.45	2.31	1.41	1.93	3.15	-	-	+	+
259350	N41826	22.84	6.64	13.93	3.44	1.64	-	+	-	-
1493390	AA894687	3.57	1.31	1.53	2.73	2.34	-	+	-	+
665127	AA195601	5.48	2.72	1.79	2.02	3.06	-	-	-	+
377672	AA056001	2.59	1.39	0.81	1.87	3.20	+	-	+	-
837953	AA458578	10.44	6.85	2.94	1.52	3.55	-	-	+	+

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1500324	AA885819	6.77	1.89	1.49	3.58	-	-	+	+
167205	R90934	7.85	3.93	3.06	2.00	+	+	-	-
594693	AA165313	7.33	3.57	2.44	2.05	-	-	+	+
868119	AA634213	10.00	4.58	3.49	2.18	-	-	-	+
502463	AA134770	5.77	2.99	1.85	1.93	-	-	-	+
342271	W61215	3.90	1.09	2.69	3.60	+	+	-	-
256680	H96392	1.72	1.47	0.44	1.17	-	-	-	+
430179	AA010091	51.95	32.22	15.13	1.61	-	-	+	-
897153	AA676961	10.77	5.36	3.55	2.01	-	-	-	+
25517	R11888	8.52	4.10	2.87	2.08	-	-	-	+
1632141	AI004916	2.15	0.93	0.79	2.31	-	-	-	+
814018	AA455714	0.98	0.77	0.26	1.28	-	-	+	+
843234	AA488588	7.02	2.32	3.49	3.03	-	+	-	-
823578	AA497118	0.56	0.53	0.14	1.06	-	-	-	+
42636	R61780	1.11	0.32	0.72	3.50	-	+	-	-
784830	AA448289	1.83	0.63	0.85	2.88	-	+	-	-
244652	N52911	24.70	12.93	7.92	1.91	-	-	+	-
950709	AA608583	4.17	1.22	2.62	3.43	+	+	-	-
1486260	AA922326	13.23	7.43	4.08	1.78	-	-	+	+
878152	AA775431	4.20	3.49	1.10	1.20	-	-	-	+
130773	R22156	3.71	1.21	1.90	3.07	-	+	-	-
586725	AA129171	2.32	0.70	1.34	3.29	-	+	-	-
511521	AA126356	33.96	23.00	9.58	1.48	-	-	-	+
295206	N75947	3.16	1.64	1.02	1.92	-	-	+	+
281072	N50912	5.02	1.92	2.10	2.62	+	-	-	-
824704	AA482198	2.04	0.70	0.98	2.91	-	+	-	-
143306	R74169	10.42	4.91	3.62	2.12	-	-	-	+
247609	N58148	3.15	1.20	1.33	2.63	-	+	-	-
250678	H95976	4.24	1.94	1.51	2.18	-	-	-	+
814427	AA458943	0.47	0.34	0.13	1.38	-	-	+	+
825058	AA504284	3.42	1.55	1.23	2.21	+	-	+	-
197888	R96220	4.97	4.63	1.27	1.07	-	-	+	+
261472	H99035	9.31	3.39	4.15	2.75	+	-	-	-
137254	R36523	1.35	0.58	0.51	2.35	-	+	-	+
52730	H29499	6.16	4.38	1.72	1.41	-	-	+	+
76252	T59873	11.64	8.74	3.19	1.33	-	-	+	+
898123	AA598487	4.77	1.81	2.03	2.63	-	+	-	-
815794	AA485214	14.69	7.77	4.77	1.89	-	-	+	+
685922	AA262559	3.59	3.70	0.90	0.97	-	-	+	+
233464	H77297	14.24	3.73	12.38	3.81	+	+	-	-
80484	T64609	14.69	14.52	3.72	1.01	-	-	+	+
322051	W37306	11.58	4.27	5.15	2.71	-	+	-	-
299154	W05406	1.37	0.71	0.45	1.92	-	-	-	+
136605	R35051	10.58	5.59	3.46	1.89	-	-	+	+
712570	AA281504	1.32	1.16	0.35	1.14	-	-	-	+
855634	AA664105	3.16	1.34	1.22	2.36	-	-	+	+
272576	N43976	6.22	4.17	1.80	1.49	-	-	-	+
83363	T68453	5.08	3.35	1.48	1.51	-	-	-	+
1536991	AA933888	10.79	3.85	5.05	2.80	+	+	-	+
755750	AA496628	5.88	4.08	1.68	1.44	-	-	+	+
795555	AA459679	3.38	1.25	1.51	2.70	-	+	-	-
148225	H13738	3.89	1.96	1.31	1.98	-	-	+	-
188151	H45810	3.25	1.41	1.23	2.30	-	-	+	-
786609	AA478481	4.81	2.23	1.73	2.15	+	-	+	-

Table 1-3

561971	AA088886	3.81	1.01	1.15	3.78	-	-	-	+
950603	AA608546	3.53	1.04	1.55	3.39	-	-	+	-
266747	N31312	3.05	1.60	1.01	1.91	-	-	-	+
129146	R10947	7.97	4.87	2.42	1.64	-	-	-	+
41940	R59087	10.51	5.11	3.65	2.05	-	-	-	+
786525	AA452113	1.46	0.42	1.00	3.46	+	-	-	-
530814	AA070226	46.55	26.81	14.60	1.74	-	-	-	+
287528	N62096	1.98	1.06	0.65	1.87	-	-	+	+
701112	AA287323	8.70	5.76	2.55	1.51	-	-	-	+
1435185	AA857632	2.56	1.69	0.75	1.51	-	-	+	+
248261	N78083	1.51	0.70	0.55	2.15	-	+	+	+
951091	AA620458	2.03	1.20	0.63	1.69	-	-	-	+
123755	R01304	5.06	2.03	2.10	2.49	+	+	+	+
505344	AA147499	2.26	1.01	0.84	2.23	-	-	-	+
827152	AA521247	3.50	2.11	1.08	1.66	-	-	+	+
812977	AA464617	7.62	5.19	2.22	1.47	-	-	+	+
1521977	AA906997	2.08	0.72	1.04	2.90	-	+	-	-
416010	W85832	53.71	32.20	16.66	1.67	-	-	+	-
1031086	AA610071	25.15	13.97	8.15	1.80	-	-	+	+
878525	AA775857	11.10	9.66	2.97	1.15	-	-	-	+
430153	AA010233	4.46	1.54	2.25	2.90	-	+	-	-
417801	W88848	17.18	13.47	4.77	1.28	-	-	+	+
108265	T70810	7.24	5.07	2.10	1.43	-	-	-	+
745296	AA625574	29.18	19.75	8.59	1.48	-	-	+	+
365098	AA025112	4.93	1.78	2.34	2.76	-	+	-	-
112785	T85958	7.75	4.81	2.38	1.61	-	-	-	+
813651	AA447761	4.96	1.93	2.17	2.58	-	+	-	-
810284	AA463932	2.27	1.27	0.74	1.79	-	-	+	+
726488	AA399264	10.10	6.03	3.17	1.68	-	-	-	+
512116	AA133721	4.59	1.55	2.41	2.96	+	-	+	-
815760	AA485018	2.31	1.17	0.81	1.98	-	-	-	+
50344	H17002	0.85	0.39	0.32	2.16	+	-	+	-
293830	N98283	4.43	1.72	1.96	2.58	+	-	+	-
213890	H72937	14.14	7.99	4.60	1.77	-	-	+	+
784225	AA446885	10.62	7.56	3.09	1.41	-	-	-	+
36607	R46837	7.52	6.30	2.06	1.19	-	-	+	+
703707	AA278195	4.12	2.45	1.31	1.68	-	-	-	+
40017	R53311	8.29	4.13	2.94	2.01	-	-	-	+
669371	AA253444	4.99	2.55	1.74	1.96	-	-	+	-
490360	AA122048	5.94	3.29	1.97	1.81	-	-	-	+
544639	AA074677	2.82	1.94	0.84	1.46	-	-	-	+
489109	AA056484	7.44	5.33	2.17	1.40	-	-	+	+
279394	N48701	3.18	1.23	1.42	2.59	+	-	+	-
74223	T48411	5.42	3.10	1.76	1.75	-	-	-	+
381036	AA054643	3.54	1.49	1.46	2.38	+	-	+	-
712610	AA281793	1.06	0.58	0.35	1.83	-	-	-	+
448117	AA702480	3.91	1.64	1.61	2.38	-	+	-	+
50114	H16851	0.83	0.28	0.44	2.92	+	+	-	+
1472638	AA872323	7.11	4.65	2.16	1.53	-	-	-	+
841399	AA487552	9.08	4.37	3.33	2.08	-	-	-	+
855799	AA664067	9.00	6.46	2.64	1.39	-	-	+	+
810753	AA457737	4.95	1.68	2.67	2.95	-	+	-	-
51749	H23049	3.65	1.79	1.33	2.05	-	-	+	-
361659	W96280	13.43	4.23	8.34	3.18	-	+	-	-

Table 1-3

252453	H87143	20.12	5.91	1.38	3.40	-	-	+	+
133717	R27767	9.46	2.97	5.91	3.18	+	+	-	-
785793	AA449037	55.68	21.05	26.01	2.65	-	+	-	-
76196	T59668	2.53	0.90	1.29	2.83	+	+	-	-
322561	W15277	107.98	70.00	33.31	1.54	-	-	-	+
825833	AA505150	1.95	1.08	0.66	1.81	-	-	-	+
755765	AA496455	4.01	2.20	1.36	1.83	-	-	-	+
1416086	AA878210	8.24	4.30	2.88	1.92	-	-	+	+
358083	W95279	2.45	0.80	1.44	3.07	-	+	-	-
813636	AA447731	84.51	49.31	27.59	1.71	-	-	-	+
490753	AA133166	5.35	3.78	1.60	1.42	-	-	+	+
809876	AA455126	27.74	19.39	8.32	1.43	-	-	-	+
744933	AA625812	2.15	1.01	0.82	2.14	+	-	+	-
321386	W44852	2.45	1.56	0.77	1.57	-	-	-	+
253577	H89589	1.48	1.24	0.41	1.19	-	-	-	+
41174	R56106	4.02	2.38	1.31	1.69	-	-	-	+
149013	R82299	7.82	5.75	2.30	1.36	-	-	+	+
296529	W01011	9.83	7.09	2.92	1.39	-	-	-	+
361097	AA017200	5.63	3.33	1.84	1.69	-	-	-	+
154749	R55619	1.76	1.07	0.57	1.65	-	-	-	+
197176	R92806	20.79	10.24	7.65	2.03	-	-	-	+
627428	AA190313	24.22	21.29	6.72	1.14	-	-	+	+
898198	AA598561	14.33	5.93	6.17	2.42	-	+	-	-
590298	AA147837	10.43	6.02	3.47	1.73	-	-	-	+
486567	AA042928	9.14	5.47	2.99	1.67	-	-	-	+
1475797	AA872122	85.21	65.01	24.92	1.31	-	-	+	-
283196	N54728	3.80	2.01	1.34	1.89	-	-	+	-
502622	AA126708	18.65	13.11	5.65	1.42	-	-	+	+
1476065	AA873060	6.33	4.83	1.85	1.31	-	-	+	+
754221	AA479154	6.80	4.46	2.13	1.53	-	-	+	+
325606	W52341	7.30	3.27	2.93	2.23	-	-	-	+
813249	AA455917	14.02	6.63	5.40	2.11	-	-	-	+
32076	R17320	1.03	0.37	0.54	2.79	-	+	-	-
448930	AA777781	7.53	4.62	2.45	1.63	-	-	-	+
1602120	AA962236	6.44	4.29	2.01	1.50	-	-	+	+
855487	AA664155	8.56	4.10	3.27	2.09	-	-	-	+
454672	AA677185	7.68	5.14	2.40	1.49	-	-	+	+
26616	R13557	1.94	0.59	1.40	3.31	-	+	-	-
1594019	AA988701	24.27	24.53	6.55	0.99	-	-	-	+
342721	W68291	14.93	6.70	6.06	2.23	-	-	+	+
590145	AA156202	4.37	5.11	1.14	0.85	-	-	+	+
843150	AA488481	5.13	1.90	2.57	2.69	-	+	-	-
282283	N52675	0.84	1.00	0.22	0.84	-	-	-	+
203132	H54628	12.63	11.94	3.48	1.06	-	-	+	+
40338	R53072	2.61	1.86	0.79	1.40	-	-	-	+
204146	H55920	2.40	1.26	0.86	1.90	-	-	+	-
782383	AA431407	1.32	0.85	0.42	1.55	-	-	+	-
141972	R68909	18.88	10.40	6.60	1.82	-	-	-	+
356863	W84627	3.18	0.94	2.45	3.38	-	+	-	-
471266	AA033564	2.72	1.68	0.89	1.62	-	-	-	+
246620	N53133	16.85	15.47	4.71	1.09	-	-	-	+
811121	AA485688	1.07	1.34	0.28	0.80	-	-	-	+
701532	AA284337	3.26	2.02	1.07	1.61	-	-	-	+
42659	R61126	10.21	3.36	6.30	3.04	-	+	-	-

Table 1-3

460841	AA708189	1.02		0.35	1.75	2.91	-	-	-	+
306771	N91887	3.61		1.49	2.23	2.42	-	-	-	+
160485	H22136	5.17	2.96	1.78	1.74	2.90	-	-	+	+
950461	AA599107	38.86	34.73	11.02	1.12	3.53	-	-	+	+
75886	T59478	14.08	9.92	4.36	1.42	3.23	-	-	+	+
283919	N50797	7.56	4.94	2.43	1.53	3.11	-	-	+	+
813271	AA455938	0.96	1.12	0.25	0.85	3.79	-	-	-	+
823627	AA490561	3.25	1.81	1.14	1.79	2.85	-	-	-	+
242706	H93552	5.15	2.96	1.78	1.74	2.90	-	-	-	+
970271	AA775957	3.16	1.23	1.52	2.56	2.07	-	+	-	-
783645	AA446690	6.96	2.63	3.51	2.65	1.98	-	+	-	-
486459	AA042858	6.24	5.89	1.75	1.06	3.57	-	-	+	+
884346	AA629524	5.38	3.61	1.71	1.49	3.14	-	-	-	+
26406	R20638	6.56	5.37	1.92	1.22	3.41	-	-	-	+
1467108	AA883160	4.29	2.67	1.42	1.61	3.02	-	-	-	+
1632161	AI004930	39.75	38.39	11.08	1.04	3.59	-	-	-	+
950473	AA599120	9.36	3.14	5.71	2.98	1.64	-	+	-	-
796885	AA463200	9.64	6.52	3.08	1.48	3.13	-	-	-	+
854122	AA669183	4.20	2.32	1.50	1.81	2.80	-	-	+	+
811911	AA456271	11.89	6.59	4.25	1.80	2.80	-	-	-	+
383188	AA074224	2.79	1.08	1.39	2.58	2.02	-	+	-	-
461336	AA699770	3.42	4.00	0.91	0.85	3.74	-	-	+	+
324342	W47576	4.41	4.29	1.24	1.03	3.57	-	-	-	+
470114	AA029295	3.09	1.27	1.44	2.44	2.15	-	+	-	+
843352	AA489343	28.44	25.71	8.17	1.11	3.48	-	-	-	+
129725	R16957	17.94	10.53	6.22	1.70	2.88	-	-	-	+
121196	T97170	22.80	22.77	6.36	1.00	3.58	-	-	+	+
838668	AA457235	3.58	4.32	0.95	0.83	3.76	-	-	+	+
283142	N51335	3.58	1.94	1.31	1.84	2.74	-	-	-	+
1636707	AI017703	19.22	12.06	6.43	1.59	2.99	-	-	-	+
123980	R01637	2.38	0.92	1.19	2.59	1.99	-	+	-	-
253009	H88588	115.86	35.75	86.54	3.24	1.34	+	+	-	-
461489	AA705058	0.92	0.61	0.30	1.51	3.07	-	-	-	+
856115	AA630584	1.30	0.82	0.43	1.57	3.00	-	-	+	-
51151	H18726	3.26	3.41	0.90	0.96	3.61	-	-	+	+
119403	AI732248	1.22	1.22	0.34	1.00	3.57	-	-	-	+
813280	AA455931	4.14	2.24	1.53	1.85	2.71	-	-	-	+
211206	H67988	4.71	2.93	1.60	1.61	2.95	-	-	-	+
727251	AA412053	34.32	29.87	10.07	1.15	3.41	-	-	-	+
1472150	AA873577	35.19	14.23	16.93	2.47	2.08	-	+	-	+
627688	AA197344	7.37	3.62	2.93	2.03	2.52	+	-	+	-
289288	N68998	5.44	3.58	1.79	1.52	3.03	-	-	-	+
810725	AA457717	3.27	1.79	1.20	1.83	2.72	-	-	+	-
243068	H94409	9.34	5.76	3.20	1.62	2.92	-	-	+	-
769926	AA430615	9.93	5.82	3.51	1.71	2.83	-	-	+	-
289818	N62179	7.47	5.73	2.31	1.30	3.23	-	-	-	+
196345	R92455	122.93	41.22	79.12	2.98	1.55	-	+	-	-
814080	AA465424	8.19	4.01	3.29	2.04	2.49	-	-	+	-
74511	T59099	5.23	3.37	1.75	1.55	2.98	-	-	-	+
730313	AA412643	3.95	2.39	1.37	1.65	2.88	-	-	-	+
34869	R44447	2.74	2.06	0.85	1.33	3.20	-	-	+	-
950574	AA608514	28.90	11.69	14.05	2.47	2.06	-	+	-	-
77805	T53907	15.55	9.75	5.31	1.59	2.93	-	-	-	+
1492304	AA894577	4.23	2.66	1.44	1.59	2.93	-	-	-	+



Table 1-3

263070	N20052	1.17	0.37	1.31	3.21	-	-	-	+
951216	AA620565	2.02	0.67	1.50	3.02	-	-	-	+
308726	N93236	14.73	5.64	7.73	2.61	1.91	-	+	-
40136	R53348	5.23	1.99	2.77	2.62	1.89	+	-	-
1461528	AA883711	3.95	2.84	1.27	1.39	3.12	-	-	+
760148	AA424344	2.93	1.10	1.58	2.66	1.85	-	+	-
430235	AA010223	3.43	1.72	1.36	1.99	2.52	-	-	+
884867	AA669443	24.71	16.78	8.14	1.47	3.03	-	-	+
744944	AA625890	1.73	0.90	0.67	1.92	2.59	-	-	+
202904	H54020	12.77	10.17	3.93	1.26	3.25	-	-	+
257382	N30699	12.80	10.78	3.86	1.19	3.32	-	-	+
590390	AA157150	6.42	3.41	2.45	1.88	2.62	-	-	+
460798	AA708152	1.30	0.65	0.52	2.00	2.50	-	-	+
815164	AA481135	0.88	0.71	0.27	1.25	3.25	-	-	+
214884	H74119	3.55	2.09	1.27	1.70	2.79	-	-	+
782439	AA431836	35.89	20.99	12.92	1.71	2.78	-	-	+
277596	N57002	2.91	1.45	1.17	2.00	2.49	-	-	+
344432	W73474	15.48	11.50	4.93	1.35	3.14	-	-	+
796341	AA459750	7.16	4.60	2.44	1.56	2.93	-	-	+
731308	AA416759	4.84	1.70	2.96	2.85	1.64	-	+	-
788518	AA452566	13.97	9.65	4.61	1.45	3.03	-	-	+
201628	R98008	7.51	5.63	2.39	1.33	3.14	-	-	+
1336262	AA872057	35.80	21.64	12.69	1.65	2.82	-	-	+
898206	AA598595	1.79	2.04	0.50	0.88	3.59	-	-	+
897547	AA497010	15.69	7.46	6.62	2.10	2.37	-	+	+
489823	AA099855	33.49	26.22	10.49	1.28	3.19	-	-	+
813825	AA453713	0.52	0.34	0.18	1.52	2.95	-	-	+
781401	AA430205	2.67	1.22	1.18	2.19	2.27	-	-	+
1492967	AA886333	3.68	1.85	1.49	1.99	2.47	+	-	+
31225	R41943	4.76	1.64	3.09	2.90	1.54	-	+	-
35807	R46003	2.91	1.90	1.00	1.53	2.91	-	-	+
950450	AA599094	1.77	1.02	0.66	1.75	2.70	-	-	+
814945	AA465116	4.97	2.92	1.82	1.70	2.74	-	-	+
788205	AA453926	13.21	6.75	5.32	1.96	2.48	-	-	+
789091	AA452933	9.50	6.97	3.09	1.36	3.08	-	-	+
843140	AA486516	14.94	10.35	4.99	1.44	3.00	-	-	+
838611	AA456975	52.82	30.51	19.51	1.73	2.71	-	-	+
878403	AA670353	7.20	6.82	2.13	1.06	3.38	-	-	+
868838	AA775223	3.29	2.14	1.14	1.54	2.90	-	-	+
222527	H84287	2.88	2.10	0.94	1.37	3.05	-	-	+
842767	AA486300	2.15	1.48	0.73	1.46	2.96	-	-	+
897670	AA496800	6.35	2.19	4.18	2.90	1.52	-	+	-
742581	AA400247	1.20	1.08	0.36	1.11	3.31	-	-	+
52338	H23277	2.91	1.24	1.41	2.35	2.07	-	+	+
590398	AA148034	12.27	6.94	4.63	1.77	2.65	-	-	+
840620	AA488036	13.81	8.57	4.92	1.61	2.81	-	-	+
854899	AA630374	18.74	13.26	6.24	1.41	3.00	-	-	+
38253	R35943	2.80	1.95	0.94	1.44	2.98	-	-	+
502369	AA156940	1.41	0.77	0.55	1.82	2.59	-	-	+
343609	W69460	1.58	0.58	0.94	2.73	1.68	-	+	-
701496	AA286914	2.28	1.54	0.78	1.48	2.93	-	-	+
1493252	AA886870	9.89	11.50	2.79	0.86	3.54	-	-	+
203350	H54364	1.91	0.74	1.05	2.57	1.83	-	+	-
451707	AA707659	7.59	5.80	2.45	1.31	3.09	-	-	+

Table 1-3

22747	T75072	37.20	11.55	1.18	3.22	-	-	-	+
815072	AA465180	3.49	1.33	1.77	2.62	-	-	+	-
251731	H96904	0.82	0.84	0.24	0.98	-	-	-	+
815563	AA456833	4.86	3.88	1.55	1.25	-	-	-	+
627273	AA190747	1.58	1.06	0.55	1.49	-	-	-	+
39821	R53428	5.84	5.87	1.73	0.99	-	-	-	+
898210	AA598597	8.13	8.02	2.42	1.01	-	-	-	+
46367	H09959	1.63	0.62	0.94	2.62	+	-	-	-
28436	R40663	0.89	0.37	0.46	2.43	+	-	-	-
259953	N32594	1.46	1.97	0.40	0.74	-	-	-	+
307882	W21373	7.09	4.18	2.66	1.69	-	-	-	+
713286	AA283029	0.89	0.56	0.32	1.58	-	-	-	+
195903	R92227	6.95	5.56	2.24	1.25	-	-	-	+
42076	R60847	5.72	3.44	2.12	1.66	-	-	-	+
1501998	AA887201	2.03	1.50	0.68	1.36	-	-	-	+
503468	AA128297	51.40	43.89	16.15	1.17	-	-	-	+
838478	AA457517	2.51	1.48	0.94	1.69	-	-	-	+
281191	N50983	7.36	3.32	3.45	2.22	-	+	-	+
391984	AI003625	4.56	2.74	1.70	1.66	-	-	-	+
1635665	AI016688	5.13	4.14	1.65	1.24	-	-	+	+
49485	H16600	0.54	0.37	0.19	1.46	-	-	-	+
429906	AA033973	5.35	3.27	1.98	1.63	-	-	-	+
487773	AA043347	29.51	20.98	10.06	1.41	-	-	-	+
701409	AA287948	1.54	1.24	0.50	1.23	-	-	-	+
144977	R78725	71.81	48.67	25.09	1.48	-	-	-	+
240961	H91011	2.11	0.82	1.20	2.57	-	+	-	-
1049033	AA778675	3.07	1.85	1.15	1.66	-	-	-	+
45515	H08417	3.88	2.73	1.33	1.42	-	-	+	+
784116	AA446743	0.26	0.10	0.15	2.61	-	+	-	-
796774	AA443152	0.44	0.47	0.13	0.93	-	-	-	+
415978	W86378	24.58	18.77	8.16	1.31	-	-	-	+
68636	T49801	4.83	2.97	1.80	1.63	-	-	-	+
35812	R14631	2.29	2.07	0.71	1.11	-	-	-	+
564846	AA129297	1.90	1.12	0.72	1.69	-	-	-	+
503097	AA151486	7.27	4.27	2.78	1.70	-	-	+	-
139113	R63022	4.32	3.44	1.41	1.26	-	-	+	+
131621	R23790	10.21	3.63	6.81	2.82	-	+	-	-
156386	R73545	2.14	1.88	0.67	1.14	-	-	-	+
784264	AA447021	5.67	3.30	2.18	1.72	-	-	-	+
291706	N73480	2.41	1.00	1.27	2.41	+	-	+	-
310493	W31074	7.56	7.25	2.32	1.04	-	-	-	+
784016	AA443698	33.80	23.65	11.75	1.43	-	-	-	+
282144	N51883	30.16	18.11	11.43	1.67	-	-	+	-
435341	AA700736	1.73	1.11	0.63	1.56	-	-	-	+
252904	H88485	5.40	2.26	2.83	2.39	-	+	-	-
433573	AA701655	10.67	9.66	3.34	1.11	-	-	-	+
743041	AA406040	6.48	3.98	2.43	1.63	-	-	-	+
897971	AA598868	11.55	7.34	4.24	1.57	-	-	-	+
827168	AA521292	6.51	2.85	3.24	2.29	+	-	+	-
141361	R64454	1.28	0.68	0.54	1.90	-	-	+	-
767298	AA418383	19.37	16.76	6.18	1.16	-	-	-	+
436106	AA701981	4.14	2.42	1.60	1.71	-	-	-	+
884388	AA629554	4.89	3.97	1.60	1.23	-	-	-	+
46294	H09132	1.03	0.35	0.78	2.97	+	+	-	-

Table 1-3

253253	H89104	1.73	0.58	1.33	2.95	-	-	-	+
1031346	AA609106	3.21	1.16	1.52	2.76	-	-	-	+
429574	AA011445	3.77	1.23	3.11	1.21	-	+	-	-
52327	H23459	5.70	4.77	1.85	1.19	3.08	-	-	+
810741	AA457725	72.43	48.42	26.10	1.50	2.78	-	-	+
155838	R72215	2.53	1.96	0.85	1.29	2.97	-	+	-
135083	R33917	17.07	17.59	5.18	0.97	3.29	-	-	+
271472	N35020	11.80	7.84	4.28	1.50	2.76	-	-	+
29964	R14699	1.12	0.63	0.45	1.79	2.47	-	-	+
269300	N35863	10.64	7.57	3.73	1.41	2.85	-	-	+
429678	AA011593	3.12	0.86	4.85	3.61	0.64	+	+	-
898096	AA598795	4.06	2.82	1.45	1.44	2.81	-	-	+
730554	AA436031	11.89	8.38	4.20	1.42	2.83	-	-	+
260628	H97565	8.94	7.49	2.93	1.19	3.05	-	-	+
730412	AA469966	1.25	1.00	0.42	1.25	3.00	-	-	+
825771	AA491312	12.13	9.01	4.19	1.35	2.90	-	+	-
342211	W63789	1.92	1.55	0.64	1.24	3.00	-	-	+
845609	AA644345	15.29	12.54	5.07	1.22	3.02	-	-	+
814154	AA496252	2.29	1.38	0.89	1.67	2.57	-	+	-
897730	AA598987	41.12	27.32	15.07	1.50	2.73	-	-	+
141336	R63823	2.12	1.03	0.97	2.05	2.18	+	+	-
263894	N28522	0.46	0.42	0.15	1.10	3.13	-	-	+
252864	H88424	1.20	1.00	0.40	1.20	3.03	-	-	+
291057	N72115	1.34	0.61	0.66	2.18	2.04	-	+	-
752690	AA417805	6.05	3.90	2.27	1.55	2.67	-	-	+
132911	R26186	52.56	22.96	27.26	2.29	1.93	-	+	+
489663	AA099404	2.11	1.57	0.73	1.34	2.87	-	-	+
430614	AA678065	2.38	1.00	1.30	2.39	1.83	-	+	-
1415981	AA947922	4.13	3.78	1.32	1.09	3.12	-	-	+
810027	AA464995	0.44	0.43	0.14	1.04	3.16	-	-	+
768469	AA495962	4.17	3.13	1.45	1.33	2.87	-	-	+
271076	N42970	4.31	3.13	1.53	1.38	2.82	-	-	+
759948	AA424045	4.05	3.18	1.39	1.27	2.91	-	+	-
529861	AA070997	5.75	3.77	2.16	1.52	2.66	-	-	+
838628	AA457082	2.82	2.95	0.87	0.96	3.23	-	-	+
590853	AA161283	0.66	0.64	0.21	1.04	3.14	-	-	+
36387	R46816	3.19	3.07	1.02	1.04	3.14	-	-	+
950464	AA599099	9.75	5.67	3.98	1.72	2.45	+	+	-
898227	AA598625	2.02	1.65	0.68	1.22	2.95	-	-	+
811757	AA463449	1.59	1.01	0.61	1.57	2.59	-	-	+
272049	N35369	6.87	3.74	2.95	1.84	2.33	-	-	+
328613	W45285	0.46	0.40	0.15	1.13	3.03	-	-	+
461488	AA705047	0.55	0.43	0.19	1.27	2.89	-	-	+
1593502	AA989139	2.25	1.64	0.81	1.37	2.79	-	-	+
701402	AA287936	4.23	3.51	1.43	1.20	2.96	-	+	+
234331	H93191	3.16	2.04	1.21	1.55	2.61	-	-	+
251645	H97033	0.50	0.47	0.16	1.06	3.09	-	-	+
50892	H18560	7.95	7.40	2.58	1.08	3.08	-	-	+
826335	AA521108	2.24	1.62	0.81	1.39	2.77	-	-	+
302955	N91117	10.63	10.42	3.39	1.02	3.14	-	+	+
1475738	AA872704	238.01	171.23	86.12	1.39	2.76	-	-	+
884894	AA669452	41.65	28.65	15.44	1.45	2.70	-	-	+
1638479	A1016074	3.27	2.02	1.30	1.62	2.53	-	-	+
202154	H52503	29.46	16.52	12.46	1.78	2.36	-	+	-

Table 1-3

197821	R93744	5.95	2	2.15	1.38	2.77	-	-	+	+
951022	AA620421	3.02	1.50	1.18	1.59	2.55	-	-	-	+
856535	AA633577	1.40	0.50	1.04	2.79	1.35	-	+	-	-
841140	AA487020	2.47	3.20	0.73	0.77	3.36	-	-	-	+
197765	R93767	8.83	3.78	4.92	2.34	1.79	+	-	-	-
125308	R05886	2.61	0.93	1.97	2.80	1.33	-	+	-	-
323611	W44508	1.25	0.50	0.76	2.48	1.64	-	+	-	-
853998	AA668897	12.39	4.81	8.02	2.58	1.55	-	+	-	-
884766	AA629591	9.95	9.24	3.27	1.08	3.04	-	-	+	+
813712	AA453849	7.62	7.57	2.45	1.01	3.11	-	-	+	+
811097	AA485675	2.59	1.28	1.23	2.02	2.10	+	-	+	-
243321	H95088	2.79	1.90	1.05	1.47	2.65	-	-	+	-
856575	AA633658	2.75	2.77	0.88	0.99	3.12	-	-	+	+
360232	AA013099	2.20	1.94	0.74	1.13	2.98	-	-	-	+
26185	R20616	1.15	0.80	0.43	1.43	2.69	-	-	-	+
469685	AA027912	4.95	4.33	1.67	1.14	2.97	-	-	-	+
841501	AA487382	5.94	4.80	2.07	1.24	2.88	-	-	-	+
428215	AA001745	42.11	30.60	15.40	1.38	2.73	-	-	-	+
825356	AA504492	1.18	0.90	0.42	1.32	2.79	-	-	-	+
884480	AA629719	11.68	10.42	3.91	1.12	2.99	-	-	-	+
813179	AA456717	6.60	2.40	4.88	2.75	1.35	+	-	-	-
645368	AA206267	8.48	7.77	2.82	1.09	3.01	-	-	-	+
666371	AA232645	0.85	1.07	0.26	0.79	3.30	-	-	-	+
768179	AA426629	3.80	3.11	1.32	1.22	2.87	-	-	-	+
1420830	AA826324	3.06	2.56	1.06	1.19	2.90	-	-	-	+
246541	N77514	10.77	8.71	3.78	1.24	2.85	-	-	-	+
742695	AA401521	1.83	1.55	0.63	1.18	2.90	-	-	-	+
451769	AA706795	5.25	5.71	1.66	0.92	3.16	-	-	+	+
827132	AA521232	6.63	4.13	2.68	1.60	2.48	-	-	-	+
460218	AA677457	2.10	1.12	0.95	1.87	2.21	-	-	-	+
40075	R52015	3.13	3.07	1.03	1.02	3.05	-	-	-	+
127928	R08932	3.67	2.74	1.35	1.34	2.73	-	-	-	+
279785	N48356	0.91	0.66	0.34	1.38	2.68	-	-	+	-
1591622	AA983467	49.35	42.75	16.96	1.15	2.91	-	-	-	+
824640	AA482150	6.96	6.37	2.35	1.09	2.97	-	-	-	+
1635350	AI014387	10.17	8.91	3.48	1.14	2.92	-	-	+	-
855723	AA663960	6.73	7.60	2.12	0.89	3.17	-	-	-	+
1475746	AA873762	12.48	10.32	4.39	1.21	2.84	-	-	-	+
845502	AI791165	3.87	3.96	1.26	0.98	3.07	-	-	-	+
897983	AA598874	26.99	22.87	9.42	1.18	2.86	-	-	-	+
824066	AA490734	4.08	3.05	1.51	1.34	2.70	-	-	+	-
627687	AA196287	56.19	60.68	18.11	0.93	3.10	-	-	-	+
32887	R43699	3.04	2.20	1.15	1.39	2.64	-	-	-	+
433350	AA700604	28.82	38.07	8.83	0.76	3.26	-	-	+	-
812989	AA464623	2.18	1.75	0.79	1.25	2.77	-	-	-	+
244154	N52450	4.94	3.91	1.79	1.26	2.76	-	-	-	+
278687	N62924	13.10	9.87	4.88	1.33	2.69	-	-	-	+
322537	W15263	3.18	2.15	1.26	1.48	2.53	-	-	+	-
399532	AA733038	6.74	4.35	2.74	1.55	2.46	-	-	-	+
854570	AA669124	4.11	2.43	1.78	1.69	2.31	-	-	-	+
1411726	AA856556	30.68	28.07	10.55	1.09	2.91	-	-	-	+
1475881	AA872153	14.80	6.17	9.24	2.40	1.60	-	+	-	-
80764	T63027	26.16	26.33	8.71	0.99	3.00	-	-	-	+
825012	AA489194	4.46	3.05	1.76	1.46	2.53	-	-	-	+

Table 1-3

51981	H23422	19.62	7.89	1.50	2.49	-	-	-	+
1591264	AA955007	3.18	1.11	1.11	2.88	-	-	-	+
898265	AA598965	20.16	18.09	7.03	1.11	2.87	-	-	+
511459	AA115310	37.04	46.42	11.64	0.80	3.18	-	-	+
296429	W00890	5.99	4.85	2.18	1.23	2.75	-	-	+
754449	AA410480	1.78	1.58	0.63	1.13	2.85	-	-	+
813149	AA456298	6.11	6.08	2.05	1.00	2.97	-	-	+
741988	AA402915	1.74	1.20	0.69	1.45	2.52	-	-	+
825842	AA504772	6.00	6.39	1.98	0.94	3.03	-	-	+
1492412	AA878561	236.26	205.84	83.73	1.15	2.82	-	-	+
1422794	AA827405	2.62	1.78	1.05	1.47	2.49	-	-	+
731104	AA421455	0.65	0.64	0.22	1.02	2.93	-	-	+
80292	T64433	2.18	1.64	0.83	1.33	2.62	-	-	+
969844	AA663826	9.12	11.76	2.88	0.78	3.17	-	-	+
75059	T50370	21.82	10.94	11.17	2.00	1.95	-	+	+
303139	W19519	2.17	1.22	1.00	1.77	2.17	-	-	+
48033	H11760	0.51	0.50	0.17	1.02	2.92	-	-	+
282720	N50079	8.31	6.24	3.18	1.33	2.61	-	-	+
291974	N73091	57.24	40.53	22.63	1.41	2.53	-	-	+
307029	N89671	56.38	44.33	21.22	1.27	2.66	-	-	+
593520	AA165402	6.25	6.33	2.13	0.99	2.93	-	-	+
1471829	AA873351	99.54	79.29	37.33	1.26	2.67	-	-	+
461955	AA779968	1.94	0.91	1.09	2.13	1.78	-	+	-
27072	R37780	0.29	0.27	0.10	1.07	2.85	-	-	+
282895	N51226	3.91	1.96	2.03	1.99	1.93	+	-	+
866866	AA679341	3.00	2.04	1.23	1.47	2.45	-	-	+
878373	AA670330	31.06	35.83	10.19	0.87	3.05	-	-	+
471641	AA034945	4.79	2.74	2.22	1.75	2.16	-	+	+
447568	AA702422	9.00	7.57	3.31	1.19	2.72	-	-	+
866276	AA663160	1.94	1.83	0.68	1.06	2.84	-	-	+
246800	N59078	6.67	7.15	2.25	0.93	2.96	-	-	+
565062	AA133896	1.38	1.65	0.45	0.84	3.05	-	-	+
42313	R60946	1.33	1.07	0.51	1.24	2.64	-	-	+
753917	AA479100	6.49	5.74	2.36	1.13	2.75	-	-	+
234036	H68988	4.77	3.83	1.81	1.24	2.64	-	-	+
884333	AA629528	4.10	2.83	1.69	1.45	2.43	-	-	+
758347	AA403072	2.75	2.38	1.01	1.16	2.72	-	-	+
795738	AA460286	2.06	1.70	0.77	1.21	2.66	-	-	+
72616	T51995	1.67	1.29	0.65	1.29	2.58	-	-	+
251753	H96908	2.29	3.06	0.74	0.75	3.12	-	-	+
950607	AA608548	19.79	11.09	9.50	1.78	2.08	-	-	+
825859	AA504784	1.64	1.22	0.65	1.35	2.52	-	-	+
161456	H25546	13.35	10.78	5.08	1.24	2.63	-	-	+
897577	AA496881	0.52	0.50	0.18	1.03	2.82	-	-	+
1599489	AA961361	5.51	4.50	2.10	1.22	2.62	-	-	+
195652	R89403	18.03	15.86	6.65	1.14	2.71	-	-	+
431597	AA676422	5.45	2.95	2.73	1.85	2.00	+	-	+
486340	AA044123	16.47	11.82	6.73	1.39	2.45	-	-	+
742806	AA400362	1.76	2.10	0.59	0.84	2.99	-	-	+
770935	AA433877	86.21	50.78	40.44	1.70	2.13	-	-	+
53165	R16153	0.89	0.87	0.32	1.02	2.80	-	-	+
307231	N93428	2.04	1.57	0.81	1.30	2.53	-	-	+
826459	AA521083	12.36	7.59	5.65	1.63	2.19	-	-	+
868308	AA634008	65.99	60.02	24.35	1.10	2.71	-	-	+

Table 1-3

1056203	AA621031	1.92	9	1.16	2.15	1.65	+	-	-	-
486175	AA043133	10.39	7.02	3.91	1.15	2.66	-	-	+	-
81484	T63342	10.87	5.15	6.40	2.11	1.70	-	+	-	-
429047	AA007509	3.17	1.48	1.90	2.14	1.67	-	+	-	-
783697	AA446839	3.19	2.89	1.18	1.10	2.70	-	-	-	+
784128	AA446759	1.83	1.82	0.65	1.00	2.80	-	-	+	-
253865	N22007	1.68	1.49	0.63	1.13	2.67	-	-	+	+
1291658	AA776810	2.05	1.00	1.17	2.05	1.75	-	+	-	-
595604	AA167269	9.41	8.19	3.56	1.15	2.65	-	-	-	+
784129	AA432085	6.53	5.53	2.50	1.18	2.61	-	-	+	-
251452	H97993	3.12	2.79	1.17	1.12	2.67	-	-	+	-
767346	AA418557	4.50	3.43	1.82	1.31	2.47	-	-	+	-
138865	R62742	5.42	4.35	2.14	1.25	2.53	-	-	-	+
770983	AA427401	7.24	6.59	2.70	1.10	2.68	-	-	+	-
43705	H05706	0.35	0.33	0.13	1.07	2.71	-	-	-	+
76005	T47291	2.35	1.80	0.95	1.31	2.46	-	-	-	+
156045	R72518	2.01	1.50	0.83	1.34	2.43	-	-	-	+
784085	AA446639	3.93	3.17	1.56	1.24	2.52	-	-	-	+
418053	W90732	7.57	7.14	2.80	1.06	2.70	-	-	-	+
322192	W37779	7.97	9.95	2.69	0.80	2.96	-	-	+	+
309864	W23847	2.49	1.62	1.12	1.54	2.22	+	-	+	-
44975	H08820	8.91	10.72	3.05	0.83	2.92	-	-	-	+
825719	AA504834	0.76	0.67	0.29	1.14	2.62	-	-	-	+
291394	W03029	6.46	4.22	2.92	1.53	2.22	-	-	+	-
796313	AA461311	0.78	0.80	0.28	0.98	2.77	-	-	-	+
810734	AA480820	2.46	1.75	1.05	1.40	2.35	-	-	-	+
488033	AA045792	3.14	2.24	1.34	1.40	2.34	-	-	-	+
884546	AA629808	156.92	121.14	64.25	1.30	2.44	-	-	-	+
41411	R56885	112.58	99.23	43.25	1.13	2.60	-	-	-	+
247546	N58107	11.16	8.98	4.48	1.24	2.49	-	-	+	-
743081	AA496173	3.75	3.51	1.41	1.07	2.67	-	-	-	+
37665	R61374	1.01	0.72	0.43	1.40	2.33	-	-	-	+
563451	AA113347	4.17	1.82	2.90	2.29	1.44	-	+	-	-
725503	AA292995	4.55	3.15	1.99	1.45	2.28	-	-	-	+
1522799	AA902249	1.23	1.56	0.42	0.79	2.94	-	-	-	+
268178	N35772	28.02	27.47	10.37	1.02	2.70	-	-	-	+
757222	AA496148	5.14	3.76	2.18	1.37	2.36	-	-	+	-
1475028	AA857413	249.73	233.03	94.34	1.07	2.65	-	-	-	+
840530	AA487934	4.05	3.61	1.56	1.12	2.60	-	-	-	+
950989	AA620404	2.48	1.95	1.02	1.28	2.44	-	-	-	+
756556	AA481438	17.53	6.47	17.49	2.71	1.00	+	-	-	-
868396	AA634164	6.77	5.15	2.83	1.32	2.39	-	-	+	+
857681	AA633768	54.39	52.93	20.36	1.03	2.67	-	-	-	+
1555523	AA974971	1.21	0.85	0.53	1.41	2.28	-	-	+	-
206785	R98047	6.05	5.71	2.30	1.06	2.63	-	-	-	+
781061	AA446479	0.73	0.44	0.35	1.64	2.05	-	-	-	+
345056	W72798	0.87	0.35	0.71	2.47	1.22	-	+	-	-
897625	AA496736	2.58	3.15	0.90	0.82	2.87	-	-	-	+
376764	AA046321	2.58	2.44	0.98	1.06	2.63	-	-	-	+
452936	AA778869	5.15	4.43	2.04	1.16	2.52	-	-	-	+
76605	T51043	2.48	2.10	0.99	1.18	2.50	-	-	-	+
859832	AA668531	2.57	2.48	0.97	1.04	2.64	-	-	-	+
809995	AA454862	2.80	2.07	1.21	1.35	2.32	-	-	-	+
632137	AA167728	0.80	0.57	0.35	1.41	2.27	-	-	-	+

Table 1-3

122183	T98628	7.61	2.56	0.69	2.98	-	-	-	+
284545	N64762	1.10	0.49	1.42	2.24	-	-	-	+
815772	AA485024	1.44	1.12	0.61	1.29	-	-	-	+
629498	AA192765	3.73	2.69	1.64	1.39	-	-	-	+
243784	N33927	2.99	2.12	1.33	1.41	-	-	-	+
838504	AA457529	41.97	41.10	15.95	1.02	-	-	-	+
450711	AA704459	1.29	1.51	0.46	0.86	-	-	-	+
83011	T70522	32.97	35.26	12.18	0.93	-	-	-	+
866882	AA679352	10.73	11.79	3.94	0.91	-	-	-	+
277761	N49605	2.43	1.65	1.12	1.47	-	-	-	+
489722	AA099593	4.03	4.49	1.47	0.90	-	-	-	+
796527	AA463822	1.35	1.17	0.55	1.15	-	-	+	-
33045	R19478	0.63	0.43	0.29	1.47	-	-	+	-
137984	R63129	1.63	1.42	0.66	1.15	-	-	+	-
1574594	AA968896	3.08	2.54	1.28	1.21	-	-	-	+
138861	R62780	1.72	1.35	0.74	1.27	-	-	-	+
289645	N62866	0.92	0.67	0.42	1.38	-	-	+	-
140792	R67081	1.66	0.85	1.02	1.96	+	-	-	-
130136	R20813	0.29	0.22	0.12	1.29	-	-	+	-
503741	AA131466	3.64	4.28	1.33	0.85	-	-	+	+
827144	AA521243	2.52	2.65	0.96	0.95	-	-	-	+
841348	AA487650	11.96	14.60	4.33	0.82	-	-	-	+
949940	AA599178	12.52	17.40	4.38	0.72	-	-	-	+
450464	AA682819	3.97	2.31	2.13	1.72	-	-	-	-
743211	AA400214	3.84	1.71	2.87	2.24	+	-	-	+
460164	AA676920	0.80	0.68	0.33	1.17	-	-	-	+
856174	AA630620	0.25	0.18	0.11	1.36	-	-	-	+
142326	R70649	1.49	0.78	0.90	1.92	+	-	-	-
1475842	AA872143	224.84	89.33	214.43	2.52	+	-	-	-
731255	AA420992	2.04	1.38	0.98	1.48	-	-	+	+
897199	AA677499	14.78	16.78	5.51	0.88	-	-	-	+
244202	N52973	9.25	9.97	3.51	0.93	-	-	-	+
838568	AA456931	53.19	53.66	20.71	0.99	-	-	-	+
844768	AA774230	6.47	4.45	3.08	1.45	-	-	-	+
251417	H96504	0.69	0.68	0.27	1.01	-	-	-	+
898251	AA598675	2.02	3.02	0.71	0.67	-	-	-	+
452668	AA779221	4.95	6.83	1.77	0.72	-	-	+	-
809722	AA455482	50.59	51.18	19.96	0.99	-	-	-	+
278531	N66158	57.48	74.35	20.99	0.77	-	-	-	+
744905	AA625788	2.18	2.08	0.89	1.05	-	-	-	+
251727	H97851	4.88	3.87	2.17	1.26	-	-	-	+
884892	AA669451	8.02	8.08	3.19	0.99	-	-	-	+
487373	AA046489	54.67	58.82	21.22	0.93	-	-	-	+
842863	AA486403	11.11	10.81	4.49	1.03	-	-	-	+
767988	AA418943	3.64	3.03	1.58	1.20	-	-	-	+
897448	AA489478	31.17	29.51	12.76	1.06	-	-	-	+
1558642	AA976544	3.11	3.33	1.21	0.93	-	-	-	+
46620	H10036	5.25	2.02	6.01	2.61	-	+	-	-
855336	AA630376	5.69	5.26	2.37	1.08	-	-	-	+
1573087	AA970720	2.41	3.27	0.88	0.74	-	-	-	+
811880	AA454634	3.13	4.22	1.15	0.74	-	-	-	+
841615	AA487680	12.16	5.15	11.09	2.36	+	-	-	-
149895	H00752	6.05	4.56	2.84	1.33	-	-	+	-
461699	AA682274	3.44	1.35	3.84	2.55	+	-	-	-

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Table 1-3

743574	AA609456	6.42	6	3.21	1.44	2.00	-	-	-	+
823850	AA490456	0.78	0.80	0.32	0.98	2.46	-	-	+	-
435330	AA699926	10.36	11.94	4.03	0.87	2.57	-	-	+	-
84078	T70999	0.34	0.26	0.16	1.29	2.14	-	-	-	+
415415	W81118	9.68	10.64	3.83	0.91	2.52	-	-	-	+
285226	N66278	25.74	40.08	9.23	0.64	2.79	-	-	+	-
41207	R56771	2.05	2.42	0.80	0.85	2.57	-	-	-	+
122239	T98662	6.50	5.28	2.98	1.23	2.18	-	-	-	+
284865	N66734	2.87	2.71	1.22	1.06	2.34	-	-	-	+
867717	AA780841	5.61	3.47	3.15	1.61	1.78	-	-	-	+
50562	H16903	34.20	30.09	15.14	1.14	2.26	-	-	+	-
71672	T58002	4.77	4.16	2.13	1.15	2.23	-	-	-	+
565779	AA135870	31.62	13.68	30.14	2.31	1.05	-	+	-	-
361323	AA017544	4.53	6.49	1.70	0.70	2.66	-	-	+	-
111389	T84308	2.59	2.15	1.21	1.20	2.14	-	-	-	+
731337	AA416782	0.75	0.75	0.32	1.01	2.32	-	-	-	+
455271	AA677574	1.64	1.62	0.71	1.01	2.30	-	-	+	-
488301	AA085748	0.97	1.24	0.38	0.78	2.52	-	-	+	-
511107	AA088371	7.14	7.60	3.02	0.94	2.36	-	-	-	+
626462	AA188999	5.86	3.92	3.24	1.49	1.81	-	-	-	+
897906	AA598652	10.34	13.66	4.08	0.76	2.54	-	-	-	+
810408	AA457092	9.85	10.74	4.18	0.92	2.36	-	-	-	+
22600	T87235	0.36	0.18	0.28	1.99	1.29	+	-	-	-
343688	W69160	6.94	5.30	3.54	1.31	1.96	-	-	+	-
461761	AA682399	8.65	14.46	3.24	0.60	2.67	-	-	-	+
784285	AA447503	3.99	2.02	3.12	1.98	1.28	-	+	-	-
845780	AI791127	5.95	4.75	2.97	1.25	2.00	-	-	-	+
266500	N22687	7.14	7.39	3.12	0.97	2.29	-	-	-	+
119851	T94611	6.52	3.28	5.16	1.98	1.26	-	+	-	-
809824	AA455519	2.66	3.75	1.05	0.71	2.54	-	-	-	+
782513	AA432030	5.78	4.46	2.98	1.29	1.94	-	-	+	-
648046	AA206914	15.56	14.08	7.32	1.11	2.13	-	-	-	+
704076	AA279172	5.70	2.95	4.40	1.93	1.30	-	+	-	-
855236	AA782292	2.75	2.53	1.30	1.08	2.12	-	-	+	-
627053	AA190997	11.04	13.42	4.64	0.82	2.38	-	-	+	-
738970	AA421769	15.96	26.86	6.13	0.59	2.61	-	-	+	-
757191	AA443966	6.08	6.70	2.66	0.91	2.29	-	-	+	-
740780	AA477283	4.71	4.39	2.24	1.07	2.10	-	-	+	-
427812	AA001614	9.94	12.03	4.27	0.83	2.33	-	-	+	-
1613940	AI000294	3.48	3.17	1.70	1.10	2.05	-	-	-	+
361943	AA001444	2.86	1.43	2.52	2.01	1.14	+	-	-	-
840698	AA486370	7.45	7.83	3.42	0.95	2.18	-	-	-	+
220069	H85437	4.81	8.77	1.92	0.55	2.50	-	-	-	+
1604717	AA988630	13.38	13.90	6.58	0.96	2.03	-	-	+	-
41287	R56613	0.72	0.52	0.45	1.38	1.59	-	-	+	-
460487	AA677706	24.08	105.26	8.92	0.23	2.70	-	-	+	+
151477	H02837	2.44	2.74	1.21	0.89	2.01	-	-	+	-
362080	AA001434	3.81	1.72	5.56	2.21	0.69	-	+	-	-
289832	N63172	6.67	4.11	5.46	1.62	1.22	+	-	-	-
767784	AA418670	8.86	14.76	4.05	0.60	2.19	-	-	+	-
122428	T99280	2.03	1.78	1.29	1.14	1.57	-	-	+	-
753794	AA406115	1.65	0.94	1.78	1.75	0.93	+	-	-	-
563444	AA112660	6.23	10.09	3.10	0.62	2.01	-	-	-	+
740941	AA478298	12.33	29.84	6.23	0.41	1.98	-	-	+	-



Table 1-3

462953	AA682423	3.21	1.90	0.64	1.69	-	-	+	-
1492202	AA875913	2.60	1.98	2.70	1.31	0.96	+	-	-

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Table 1-4

Clone	GenBank Acc. No.	Aver. of Tumors	Aver. of Normal of BPH	Aver. /Normal	Tumor /BPH	T/N 10X, >1/5	T/N 3/5 3X, >5/5	T/N 10X, >1/5	T/B 10X, >1/5	T/B 5X, >3/5	T/B 3X, >5/5
788180	AA453562	25.18	0.50	0.50	31.24	50.69	+	+	+	+	+
646037	AA196979	24.42	1.02	0.75	23.91	32.70	+	+	+	+	+
1034473	AA779728	33.61	1.51	1.35	22.27	24.97	+	+	+		
281003	N50880	128.77	6.30	4.90	20.43	26.26	+	+	+	+	+
308682	W25202	8.99	0.87	0.27	10.37	32.91	+	+	+	+	+
281039	N47717	14.05	0.94	0.90	14.99	15.57	+		+		
284701	N64840	33.05	7.05	1.52	4.68	21.68			+	+	+
823940	AA490213	22.39	1.32	2.83	16.99	7.91	+	+	+		
42415	R60981	6.86	0.51	0.72	13.52	9.49	+	+	+		
46166	H09076	13.13	0.93	1.71	14.12	7.68	+	+	+		
784168	AA432103	53.04	7.37	3.83	7.20	13.84		+	+		+
773479	AA427899	12.32	0.65	5.99	18.85	2.05	+	+	+		
222157	H85806	8.80	1.02	0.72	8.67	12.14	+	+	+		+
486035	AA043109	24.75	3.47	1.86	7.13	13.32	+	+	+	+	+
450049	AA703396	18.37	1.83	1.80	10.05	10.21	+	+	+	+	+
66336	T66832	1.67	0.63	0.10	2.63	16.70			+		
35058	R45192	15.59	1.89	1.44	8.24	10.81	+	+	+		+
26736	R39891	9.52	3.36	0.62	2.83	15.37			+		+
593185	AA159714	28.06	5.61	2.29	5.00	12.23	+		+		+
32160	R43432	26.80	3.59	2.77	7.47	9.69		+	+	+	+
814053	AA465495	14.66	1.70	1.75	8.61	8.38	+	+	+		
292515	N68465	16.22	2.86	1.56	5.67	10.38			+	+	+
730739	AA436097	36.49	7.10	3.45	5.14	10.57	+		+	+	+
282089	N48259	11.18	1.51	1.41	7.41	7.92	+		+		
283312	N54763	63.94	6.63	12.14	9.65	5.27	+	+	+		
291255	N72215	15.20	1.35	4.65	11.29	3.27	+	+	+		
1048810	AA621342	20.15	3.04	2.59	6.63	7.78	+	+	+		+
197525	H52119	9.52	1.85	1.06	5.16	9.01			+		+
67401	T49326	1.47	0.20	0.23	7.28	6.27	+		+		
490178	AA121266	24.55	5.63	2.73	4.36	8.99	+		+		+
1556526	AA935560	0.88	0.15	0.12	5.96	7.33	+		+		
746152	AA419486	9.35	2.23	1.07	4.18	8.70			+		
1034738	AA780190	22.40	3.90	3.28	5.74	6.82		+	+	+	+
259374	N31952	10.51	2.33	1.31	4.50	8.04			+		
757435	AA437224	365.78	59.86	58.35	6.11	6.27	+		+		+
754280	AA479284	23.83	3.20	4.92	7.46	4.85	+	+	+		
877835	AA625634	23.06	4.34	3.34	5.32	6.90		+	+		+
712950	AA282272	11.53	3.21	1.34	3.59	8.58	+		+		
50772	H16803	18.10	6.74	1.91	2.68	9.47			+		+
1636908	AI000271	6.58	4.38	0.63	1.50	10.44			+	+	+
432194	AA679414	10.34	1.11	4.04	9.35	2.56	+	+	+		
488964	AA047260	7.77	2.13	0.96	3.64	8.08	+		+		
1412481	AA845156	8.41	3.50	0.90	2.40	9.31	+		+		
283173	N45236	17.85	3.97	2.47	4.49	7.21	+		+		
811867	AA454963	24.57	2.97	7.43	8.28	3.30	+	+	+		
26519	R20669	36.05	19.25	3.76	1.87	9.59			+	+	+
687297	AA235224	12.18	3.12	1.63	3.90	7.48				+	+
666334	AA232249	1.64	1.54	0.16	1.07	10.14			+	+	+
1468260	AA884926	4.53	1.13	0.65	4.03	6.96			+		
258300	N30680	18.15	4.53	2.65	4.01	6.86			+		
971279	AA682905	54.34	6.63	22.20	8.20	2.45		+	+		
1610448	AA991856	135.55	57.06	16.44	2.38	8.25			+		+

Table 1-4

461522	AA705237	1.21	0.65	0.14	1.87	8.74				+			
868282	AA633957	8.99	2.1	1.47	4.48	6.12				+		+	+
280217	N47941	20.52	5.86	2.89	3.50	7.09	+				+		
240694	H78135	4.53	0.90	0.83	5.01	5.47				+			+
321706	W35398	7.80	1.86	1.25	4.20	6.23					+		
770066	AA430545	11.43	2.60	1.93	4.40	5.94	+				+		
811603	AI732784	19.62	2.74	6.22	7.16	3.15			+	+			
51773	H23211	11.48	2.40	2.09	4.77	5.50				+			+
66317	T66815	5.50	1.76	0.78	3.13	7.06					+		
35626	R45292	9.42	1.09	6.51	8.67	1.45	+		+	+			
450307	AA682851	9.39	1.62	2.25	5.80	4.17	+		+				
447715	AA702781	14.83	7.21	1.88	2.06	7.90					+		
731290	AA416843	11.60	4.56	1.57	2.54	7.40					+		
825857	AA504783	4.27	2.51	0.52	1.70	8.20						+	+
565235	AA136125	35.83	12.59	5.15	2.85	6.96					+		
756600	AA481464	47.06	7.13	14.79	6.60	3.18			+	+			
293635	N63807	26.47	3.44	12.94	7.69	2.05	+		+	+			
757392	AA426110	0.86	0.37	0.12	2.32	7.41							+
595695	AA173189	3.58	2.33	0.44	1.54	8.16						+	+
151055	H02230	27.32	7.51	4.62	3.64	5.92					+		
838366	AA457172	11.15	1.82	3.27	6.12	3.41			+	+			
460279	AA677629	0.87	0.46	0.11	1.87	7.58					+	+	
595297	AA173598	3.07	2.45	0.38	1.25	8.17					+	+	+
1631713	AI025015	5.68	0.93	1.77	6.13	3.21			+	+			
564801	AA129551	12.35	3.96	1.99	3.12	6.21					+		
293651	N69653	13.35	1.84	6.56	7.26	2.04	+		+	+			
745347	AA625666	2.15	0.29	1.14	7.39	1.88			+	+			
772304	AA404486	113.14	18.10	38.24	6.25	2.96			+	+			
262053	N25030	10.75	5.15	1.52	2.09	7.08							+
81331	T60075	2.84	0.78	0.51	3.63	5.53	+				+		
840894	AA482340	34.81	11.87	5.66	2.93	6.15						+	
839081	AA488732	16.60	5.37	2.78	3.09	5.98					+		
796366	AA459761	34.94	17.03	5.05	2.05	6.92					+		+
359661	AA011095	26.24	8.79	4.39	2.99	5.97							+
50188	H17943	10.75	2.29	2.53	4.69	4.25				+			+
84955	T74846	5.26	1.01	1.43	5.21	3.69			+				
159608	H16152	14.43	4.14	2.69	3.49	5.36					+		
1390584	AA843592	6.54	1.91	1.21	3.42	5.41					+		
825736	AA504842	0.92	0.60	0.13	1.54	7.26						+	
22161	T66154	20.24	13.40	2.80	1.51	7.24						+	+
787938	AA452278	5.09	1.27	1.08	4.01	4.71						+	
809603	AA442991	49.03	6.94	29.52	7.06	1.66	+		+	+			
826109	AA521327	0.75	0.54	0.10	1.38	7.27					+		+
884606	AA630006	33.46	13.42	5.43	2.49	6.16					+		
825822	AA491370	14.07	9.48	1.97	1.48	7.16					+		+
531028	AA070495	21.14	3.89	6.62	5.44	3.20			+	+			
814062	AA465338	0.81	0.47	0.12	1.72	6.83					+	+	
826103	AA521416	1.31	0.82	0.19	1.61	6.93						+	
461670	AA779919	8.90	1.72	2.71	5.19	3.28				+			
415700	W85697	3.36	0.61	1.15	5.53	2.93			+				
815163	AA481144	1.20	0.57	0.19	2.09	6.36						+	
810558	AA464568	14.49	3.00	4.01	4.83	3.61				+			
810220	AA464689	2.17	0.39	0.77	5.60	2.82			+				
359781	AA010932	7.82	2.50	1.49	3.13	5.26							+

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Table 1-4

796754 AA460719	0.66	0.66	0.10	0.80	6.50					+	+
771053 AA430718	16.14	6.65	3.34	2.43	4.83						+
289071 N63609	37.48	15.32	7.78	2.45	4.82				+		
1637282 AI005515	4.01	2.58	0.70	1.55	5.71				+		
263697 H99672	4.23	0.93	1.58	4.57	2.68		+				
586780 AA130677	1.92	1.75	0.31	1.10	6.12				+		+
416374 W86202	4.49	2.66	0.81	1.69	5.52				+		
375682 AA032221	31.04	12.66	6.60	2.45	4.70						+
853968 AI791173	12.10	2.86	4.21	4.23	2.87		+				
287728 N75893	2.76	0.70	0.89	3.97	3.10	+					
842927 AA486445	4.24	3.59	0.72	1.18	5.88				+	+	
878281 AA670286	6.80	3.30	1.37	2.06	4.97					+	
359701 AA011176	5.21	2.32	1.09	2.25	4.78						+
897807 AA598531	5.08	2.77	0.98	1.83	5.16					+	
855749 AA663983	50.50	12.03	18.24	4.20	2.77			+			
264895 N21170	7.86	1.63	3.70	4.82	2.12			+			
825207 AA504120	11.96	2.92	4.19	4.09	2.86			+			
461476 AA705041	0.78	0.61	0.14	1.28	5.64					+	
449275 AA777705	3.81	0.83	1.64	4.58	2.32	+					
755239 AA422139	17.93	9.29	3.62	1.93	4.95						+
259973 N47829	1.66	1.95	0.28	0.85	5.99					+	+
290370 N62301	0.62	0.48	0.11	1.30	5.53						+
773287 AA425534	15.94	8.17	3.27	1.95	4.87						+
472689 AA873159	5.15	1.21	2.03	4.26	2.53	+					
252314 H87175	0.69	0.62	0.12	1.11	5.66						+
454317 AA677165	20.56	33.95	3.34	0.61	6.16				+		
1585549 AA976714	6.44	3.55	1.31	1.81	4.92						+
491764 AA150502	0.81	0.59	0.15	1.36	5.37						+
139771 R62352	7.72	6.17	1.42	1.25	5.44				+		
462097 AA705376	8.32	6.33	1.55	1.31	5.38					+	
279482 N48804	8.66	3.25	2.16	2.67	4.00				+		
824122 AA490609	4.64	2.75	0.94	1.69	4.95					+	
1031583 AA609323	38.01	9.06	15.59	4.20	2.44	+					
250869 N23605	123.92	32.54	44.10	3.81	2.81	+					
896914 AA779391	18.03	7.40	4.35	2.44	4.14					+	
814306 AA459100	18.28	10.68	3.77	1.71	4.85						+
77915 T61271	14.99	17.48	2.63	0.86	5.70				+		
260116 N32044	0.88	0.86	0.16	1.03	5.52						+
210405 H65395	34.02	7.84	15.49	4.34	2.20			+			
703943 AA278473	4.77	2.81	0.99	1.70	4.82						+
824267 AA491265	0.74	0.41	0.16	1.81	4.68						+
813973 AA455689	3.24	0.88	1.18	3.70	2.75			+			
825297 AA504536	0.96	0.65	0.19	1.48	4.97						+
838807 AA457681	1.90	2.58	0.33	0.74	5.71						+
1607765 AA989473	3.96	1.73	0.96	2.29	4.14						+
86160 T72336	2.10	0.74	0.59	2.82	3.58						+
1456160 AA862465	41.61	40.32	7.76	1.03	5.36				+		
897767 AA598470	2.07	0.49	0.98	4.25	2.12			+			
1466631 AA883679	1.21	0.71	0.26	1.71	4.63						+
280763 N50563	0.53	0.50	0.10	1.05	5.28						+
768643 AA430351	41.57	23.92	9.10	1.74	4.57				+		
610124 AA171459	1.70	1.73	0.32	0.98	5.32						+
1631849 AI004315	25.01	12.24	5.91	2.04	4.24						+
204111 H55907	3.38	0.87	1.40	3.86	2.42			+			



Table 1-4

282283	N52675	0.84	1.08	0.22	0.84	3.85
813271	AA455938	0.96	1.12	0.25	0.85	3.79
461336	AA699770	3.42	4.00	0.91	0.85	3.74
742581	AA400247	1.20	1.08	0.36	1.11	3.31
161456	H25546	13.35	10.78	5.08	1.24	2.63

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Table 1-5

Clone	GenBank Acc No.	Aver. of	Aver. of BPH	Aver. of	Prostate Spec Exp	T/N & T/BPH	Secreted
282089	N48259	1.51	1.41	11.18	+	+	-
646037	AA196979	1.02	0.75	24.42	+	+	+
745283	AA625567	5.76	1.97	7.94	+		-
30428	R42061	0.99	1.16	4.29		+	+
35058	R45192	1.89	1.44	15.59		+	+
46166	H09076	0.93	1.71	13.13		+	+
67401	T49326	0.20	0.23	1.47		+	+
240694	H78135	0.90	0.83	4.53		+	+
280217	N47941	5.86	2.89	20.52		+	+
292515	N68465	2.86	1.56	16.22		+	+
593185	AA159714	5.61	2.29	28.06		+	+
730739	AA436097	7.10	3.45	36.49		+	+
1592006	AA953229	1.51	1.24	5.30		+	+
32160	R43432	3.59	2.77	26.80		+	
42415	R60981	0.51	0.72	6.86		+	
50188	H17943	2.29	2.53	10.75		+	
51773	H23211	2.40	2.09	11.48		+	
81331	T60075	0.78	0.51	2.84		+	
222157	H85806	1.02	0.72	8.80		+	
281003	N50880	6.30	4.90	128.77		+	
281039	N47717	0.94	0.90	14.05		+	
283173	N45236	3.97	2.47	17.85		+	
308682	W25202	0.87	0.27	8.99		+	
450049	AA703396	1.83	1.80	18.37		+	
486035	AA043109	3.47	1.86	24.75		+	
488964	AA047260	2.13	0.96	7.77		+	
490178	AA121266	5.63	2.73	24.55		+	
712950	AA282272	3.21	1.34	11.53		+	
757435	AA437224	59.86	58.35	365.78		+	
784168	AA432103	7.37	3.83	53.04		+	
788180	AA453562	0.81	0.50	25.18		+	
814053	AA465495	1.70	1.75	14.66		+	
823940	AA490213	1.32	2.83	22.39		+	
868282	AA633957	2.01	1.47	8.99		+	
877835	AA625634	4.34	3.34	23.06		+	
1034473	AA779728	1.51	1.35	33.61		+	
1034738	AA780190	3.90	3.28	22.40		+	
1048810	AA621342	3.04	2.59	20.15		+	
1412481	AA845156	3.50	0.90	8.41		+	
1556526	AA935560	0.15	0.12	0.88		+	
26519	R20669	19.25	3.76	36.05			+
35626	R45292	1.09	6.51	9.42			+
51700	H22853	1.21	0.82	3.66			+
52933	H29315	1.99	0.58	3.59			+
77915	T61271	17.48	2.63	14.99			+
80050	T63893	3.84	1.52	8.15			+
84955	T74846	1.01	1.43	5.26			+
124252	R02439	4.74	1.25	6.06			+
134969	R31789	4.59	1.48	6.81			+

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Table 1-5

Clone	GenBank Acc No.	Aver. of	Aver. of BPH	Aver. of	Prostate Spec Exp	T/N & T/BPH	Secreted
150262	H01129	3.31	3.87	13.66			+
151055	H02230	7.51	4.62	27.32			+
159608	H16152	4.14	2.69	14.43			+
186768	H51914	5.75	2.39	9.43			+
186918	H43317	1.10	0.56	3.04			+
233419	H77706	1.14	1.90	5.55			+
251806	H96647	1.83	0.46	2.94			+
252314	H87175	0.62	0.12	0.69			+
256680	H96392	1.47	0.44	1.72			+
259462	N29545	1.65	1.02	3.69			+
260116	N32044	0.86	0.16	0.88			+
263697	H99672	0.93	1.58	4.23			+
280763	N50563	0.50	0.10	0.53			+
283312	N54763	6.63	12.14	63.94			+
284701	N64840	7.05	1.52	33.05			+
290370	N62301	0.48	0.11	0.62			+
290378	N64508	17.02	4.07	17.10			+
291255	N72215	1.35	4.65	15.20			+
293635	N63807	3.44	12.94	26.47			+
293651	N69653	1.84	6.56	13.35			+
321706	W35398	1.86	1.25	7.80			+
346889	W79834	0.21	0.79	0.89			+
361922	AA001403	5.49	2.55	9.18			+
375682	AA032221	12.66	6.60	31.04			+
377672	AA056001	1.39	0.81	2.59			+
416374	W86202	2.66	0.81	4.49			+
430465	AA680186	1.53	2.30	5.55			+
450307	AA682851	1.62	2.25	9.39			+
454317	AA677165	33.95	3.34	20.56			+
461336	AA699770	4.00	0.91	3.42			+
461476	AA705041	0.61	0.14	0.78			+
491184	AA137144	1.83	2.27	6.35			+
491764	AA150502	0.59	0.15	0.81			+
509731	AA045699	23.94	6.63	39.41			+
509887	AA054701	7.39	17.54	39.47			+
511428	AA126009	24.09	5.08	24.31			+
511952	AA100674	92.92	45.17	225.66			+
530185	AA083671	7.83	1.73	8.46			+
564801	AA129551	3.96	1.99	12.35			+
586780	AA130677	1.75	0.31	1.92			+
593658	AA160080	1.02	0.21	1.08			+
594994	AA172372	10.98	2.38	14.61			+
595695	AA173189	2.33	0.44	3.58			+
609052	AA176607	0.87	0.19	0.87			+
610124	AA171459	1.73	0.32	1.70			+
666334	AA232249	1.54	0.16	1.64			+
731410	AA412250	0.58	0.10	0.53			+
756600	AA481464	7.13	14.79	47.06			+
757392	AA426110	0.37	0.12	0.86			+

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Table 1-5

Clone	GenBank Acc No.	Aver. of	Aver. of BPH	Aver. of	Prostate Spec Exp	T/N & T/BPH	Secreted
767406	AA417911	0.45	0.10	0.44			+
768643	AA430351	23.92	9.10	41.57			+
770066	AA430545	2.60	1.93	11.43			+
773248	AA425773	19.94	4.51	21.90			+
773479	AA427899	0.65	5.99	12.32			+
784130	AA432075	6.93	3.50	17.23			+
787938	AA452278	1.27	1.08	5.09			+
788655	AA449837	2.78	1.58	7.66			+
795265	AA451807	1.26	0.97	4.58			+
796161	AA461092	5.27	15.52	30.31			+
796239	AA460675	23.22	4.18	26.07			+
811582	AA458516	5.34	1.75	10.13			+
811603	AI732784	2.74	6.22	19.62			+
811867	AA454963	2.97	7.43	24.57			+
815163	AA481144	0.57	0.19	1.20			+
823615	AA496957	3.54	1.97	9.40			+
823895	AA490490	1.72	0.36	1.57			+
824126	AA490611	0.37	0.10	0.59			+
825822	AA491370	9.48	1.97	14.07			+
826072	AA521394	0.83	0.18	1.20			+
826109	AA521327	0.54	0.10	0.75			+
838285	AA458747	1.36	0.21	1.34			+
838807	AA457681	2.58	0.33	1.90			+
839081	AA488732	5.37	2.78	16.60			+
840894	AA482340	11.87	5.66	34.81			+
855624	AA664101	8.17	5.31	17.75			+
878152	AA775431	3.49	1.10	4.20			+
884606	AA630006	13.42	5.43	33.46			+
897767	AA598470	0.49	0.98	2.07			+
951313	AA620591	6.68	1.01	6.84			+
1031583	AA609323	9.06	15.59	38.01			+
1056172	AA620995	4.78	1.77	10.33			+
1456160	AA862465	40.32	7.76	41.61			+
1472689	AA873159	1.21	2.03	5.15			+
1535596	AA918370	285.67	66.91	401.67			+
1610448	AA991856	57.06	16.44	135.55			+
1631849	AI004315	12.24	5.91	25.01			+

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Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

Table 2-1: T3NO vs BPH: Genes Upregulated 5 fold or higher in at least 1 tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM126/A veBPH)	# of Tumor Samples	
1	788180	AA453310	1.96	133.47	67.99	149.63	165.70	7.38	52.32	22.54	10.36	6
2	846037	AA196979	2.38	114.00	47.98	65.24	24.62	77.47	31.06	53.59	35.90	6
3	284701	N64840	2.41	73.10	30.37	31.27	50.07	34.87	5.26	41.24	19.50	6
4	450049	AA703396	2.55	76.64	30.08	38.52	11.57	48.94	15.57	45.42	20.45	6
5	245788	N55266	0.01	0.21	22.49	11.34	8.80	10.09	19.72	21.41	63.81	6
6	281003	N50880	24.05	423.65	17.62	22.19	20.64	22.40	15.57	11.61	13.29	6
7	136805	R35051	2.56	44.38	17.34	29.78	41.52	9.28	10.57	5.71	7.21	6
8	133130	R28397	1.48	25.46	17.23	30.48	41.34	6.15	9.24	10.23	5.98	6
9	838688	AA457235	3.44	46.10	13.39	11.55	50.28	3.85	4.31	3.32	7.01	6
10	179753	H51549	0.01	0.12	11.81	9.28	11.84	11.99	10.01	17.09	10.66	6
11	1030855	AA621761	1.24	12.57	10.16	7.99	15.61	11.93	6.14	4.27	15.03	6
12	51433	H20747	2.07	19.56	9.43	6.78	6.32	8.58	7.12	8.55	19.24	6
13	306066	N91003	0.80	6.94	8.70	13.54	16.10	7.85	4.72	3.65	6.31	6
14	195975	R91398	0.50	3.83	7.67	5.89	6.60	8.91	5.51	12.71	6.41	6
15	21931	T72543	0.29	1.97	6.87	3.24	10.05	6.80	7.18	5.75	8.20	6
16	292217	N79180	0.08	0.42	6.73	3.94	10.11	7.14	10.04	4.07	5.11	6
17	825859	AA504784	1.91	12.19	6.37	6.28	4.64	5.38	5.13	5.23	11.57	6
18	428816	AA004681	0.10	0.60	6.03	6.54	8.44	8.60	4.79	4.07	3.73	6
19	195034	R88764	0.02	0.14	5.84	3.19	6.01	6.21	7.48	3.67	8.48	6
20	359701	AA011176	2.91	12.87	4.42	3.21	3.87	3.89	8.96	3.53	3.06	6
21	243641	N49548	1.55	6.34	4.09	3.17	5.98	4.16	3.84	3.52	3.85	6
22	262035	H88888	0.22	0.86	3.95	3.77	4.13	3.55	4.47	3.77	4.01	6
23	287528	N62066	0.30	3.88	12.94	15.20	2.45	18.94	12.53	19.49	9.01	5
24	784168	AA432103	15.97	194.72	12.19	9.62	26.16	14.54	17.70	1.22	3.92	5
25	259374	N31952	1.29	13.52	10.47	7.91	24.39	10.24	5.27	13.26	1.75	5
26	210820	H67712	0.19	1.82	9.61	2.75	9.06	3.94	3.08	33.98	4.85	5
27	193923	R83407	17.59	158.73	9.02	10.87	18.00	7.67	13.10	1.22	3.27	5
28	37980	R61372	0.09	0.74	8.39	9.46	28.73	3.79	3.02	4.81	0.54	5
29	1031598	AA609485	0.27	2.07	7.65	5.69	10.96	6.72	12.64	2.83	7.06	5
30	86160	T72336	1.71	11.25	6.59	7.39	5.16	4.03	15.83	2.66	4.49	5
31	268211	N29886	0.57	3.71	6.48	8.59	3.86	13.77	2.12	4.36	6.18	5

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/ AveBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumors Samples
32	482468	AA889885	2.39	6.34	5.95	10.82	5.48	10.02	1.94	3.81	5
33	868278	AA863160	20.49	6.28	1.91	3.57	4.27	14.38	9.64	3.94	5
34	811582	AA454597	21.22	5.92	9.12	4.48	4.71	6.04	2.69	8.45	5
35	428438	AA004412	3.12	5.83	1.13	4.65	4.73	5.71	11.11	7.68	5
36	130136	R20813	0.20	5.62	7.23	6.80	5.30	5.38	6.96	2.08	5
37	347586	W81432	0.24	5.62	2.89	4.97	4.10	6.44	3.72	11.48	5
38	785729	AA460291	0.11	5.58	5.69	4.96	0.83	11.93	6.34	3.73	5
39	825785	AA505117	8.57	5.51	3.24	6.88	2.95	6.31	9.01	4.56	5
40	49858	H29280	1.80	5.39	2.31	3.63	6.60	3.61	13.09	3.10	5
41	417075	W87823	4.38	5.30	2.79	3.52	3.68	4.21	8.09	9.54	5
42	840751	AA486071	9.09	5.25	3.31	10.29	3.87	2.36	7.56	4.13	5
43	241821	H93381	5.43	5.10	3.95	6.61	5.92	8.06	2.79	3.31	5
44	28063	R40970	8.52	5.08	4.26	6.83	4.57	7.80	4.62	2.43	5
45	124128	R01348	6.16	4.92	2.53	5.09	3.89	4.46	8.48	5.11	5
46	238821	H65030	23.13	4.92	2.33	3.91	3.66	11.43	4.02	4.20	5
47	134719	R28287	1.40	4.85	5.02	7.58	4.08	5.94	3.53	2.93	5
48	287745	N82244	18.41	4.83	2.38	4.28	3.75	9.64	3.82	5.12	5
49	271141	N34482	0.06	4.58	0.79	8.80	4.19	3.79	5.37	4.56	5
50	1240414	AA788780	3.60	4.55	1.68	4.13	3.48	7.19	6.34	4.47	5
51	307249	N93438	15.26	4.54	9.25	5.31	0.40	5.39	3.29	3.63	5
52	783849	AA443688	0.59	4.48	4.82	5.19	6.45	4.67	1.71	4.04	5
53	897720	AA598882	1.38	4.37	3.68	3.50	2.94	3.83	6.46	5.83	5
54	283070	N51287	0.12	4.31	3.87	6.96	3.48	5.59	1.54	4.45	5
55	265005	N21081	0.20	4.23	6.18	3.28	3.22	6.00	0.56	6.16	5
56	343987	W70234	35.37	4.16	6.16	7.98	3.20	3.85	0.24	3.50	5
57	416855	W87281	1.88	4.03	2.15	7.06	3.45	3.09	5.14	3.31	5
58	842848	AA486281	4.62	4.02	3.49	4.63	2.64	4.44	5.85	3.05	5
59	40899	R55682	0.18	3.70	3.25	3.93	4.50	3.68	4.50	2.31	5
60	359681	AA011086	84.82	3.64	4.70	6.56	3.16	3.29	3.49	0.64	5
61	128230	R06307	0.10	3.50	3.19	3.36	3.88	4.66	4.99	0.89	5
62	375682	AA032221	45.43	2.90	3.03	3.29	3.51	3.03	3.10	1.45	5
63	1468260	AA884826	0.65	34.16	18.89	1.69	59.34	105.24	0.80	19.00	4
64	743828	AA634379	0.58	22.20	29.78	48.11	29.58	0.88	23.62	1.26	4
65	1390584	AA843592	33.09	18.02	49.03	48.43	3.22	1.15	2.77	3.51	4

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples
66	41647 R52794	0.40	6.34	15.84	9.65	9.81	1.44	57.03	15.40	1.72	4
67	744944 AA825890	1.90	22.42	11.81	2.76	4.13	1.86	8.52	48.21	5.35	4
68	1034473 AA779728	0.13	1.36	10.50	22.49	23.74	3.29	9.26	2.32	1.91	4
69	487185 AA045074	0.01	0.09	8.96	13.49	10.45	13.83	13.97	1.00	1.00	4
70	1458424 AA882892	0.08	0.89	8.20	10.16	21.53	1.58	8.31	4.84	2.76	4
71	360155 AA013260	0.01	0.11	8.02	10.07	0.73	2.20	24.39	4.57	6.15	4
72	144740 R76229	0.19	1.27	6.55	7.58	10.38	6.62	10.46	1.84	2.63	4
73	24915 R39066	0.93	5.97	6.42	3.07	2.31	4.37	2.85	10.25	15.67	4
74	593185 AA165878	9.70	60.24	6.21	9.37	12.99	2.46	6.80	2.35	3.29	4
75	1058172 AA820985	11.61	70.00	6.03	6.66	5.08	10.11	2.19	1.74	10.42	4
76	782383 AA431407	0.95	5.55	5.84	8.95	11.77	5.12	5.02	1.51	2.67	4
77	1031113 AA609914	0.01	0.07	5.65	16.58	0.83	6.44	4.81	2.05	3.19	4
78	481541 AA705258	0.34	1.88	5.48	2.60	6.47	9.51	6.43	5.07	2.77	4
79	491706 AA115259	0.75	3.90	5.23	3.93	6.17	7.31	9.02	2.29	2.67	4
80	787938 AA452278	1.76	8.87	5.04	6.20	9.84	6.65	1.30	0.26	5.98	4
81	754034 AA478058	0.02	0.10	5.01	5.74	6.67	0.33	1.52	6.64	9.17	4
82	970590 AA683077	0.04	0.18	4.93	3.02	13.78	4.92	2.80	1.71	3.26	4
83	68767 T53389	0.02	0.08	4.91	1.66	3.59	10.99	8.52	0.84	4.09	4
84	282515 N68465	3.53	17.34	4.91	3.22	3.11	2.03	11.89	6.25	2.97	4
85	288210 N74392	0.44	2.17	4.80	3.19	3.94	6.56	2.56	2.70	10.45	4
86	40402 R52089	0.02	0.09	4.82	3.44	0.53	4.63	7.12	1.57	11.65	4
87	858153 AA633811	0.05	0.24	4.82	1.99	4.80	2.74	9.28	4.42	5.71	4
88	704697 AA282253	0.27	1.26	4.71	1.92	9.73	7.83	3.55	3.98	1.23	4
89	814306 AA459318	9.65	45.42	4.71	5.23	10.10	4.41	5.26	1.16	2.07	4
90	781233 AA448316	0.02	0.10	4.70	0.48	4.83	6.38	7.51	1.30	7.69	4
91	823794 AA480283	1.70	7.94	4.66	3.60	10.81	5.89	3.38	1.85	2.40	4
92	280170 N32072	12.85	59.29	4.61	5.52	5.50	9.33	1.01	1.63	4.68	4
93	448309 AA777802	2.47	11.22	4.54	4.85	3.66	3.87	9.59	2.38	2.87	4
94	236155 H61758	0.86	4.35	4.51	4.04	2.42	10.26	1.76	4.81	3.79	4
95	286879 W02256	0.94	4.15	4.41	1.85	2.47	3.73	5.40	9.60	3.44	4
96	195387 R88915	0.47	2.07	4.38	5.34	6.46	6.39	1.35	5.02	1.71	4
97	428267 AA004626	1.41	6.20	4.38	2.17	5.43	7.71	1.35	3.96	5.65	4
98	391984 AI003825	4.42	19.15	4.34	3.25	3.54	4.23	10.05	2.98	1.97	4
99	51700 H22854	1.92	8.25	4.29	5.19	4.37	3.15	9.71	1.81	1.53	4

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples	
100	754294	AA479494	15.01	62.10	4.14	5.48	5.99	2.50	3.28	4.67	2.90	4
101	210697	H88840	0.75	3.08	4.13	1.97	3.35	4.59	7.43	6.18	1.28	4
102	809456	AA443080	0.02	0.10	4.10	6.87	3.20	5.81	2.50	1.75	4.46	4
103	361659	W86189	6.37	26.06	4.09	2.86	6.98	3.63	4.72	4.28	2.07	4
104	148225	H13688	1.72	7.01	4.07	3.68	2.48	4.06	2.17	8.08	3.94	4
105	417867	W80128	13.56	54.72	4.04	3.89	3.21	2.71	10.52	0.69	3.20	4
106	436531	AA703046	1.44	5.81	4.03	1.27	3.01	3.96	5.13	8.53	2.31	4
107	1031346	AA609106	1.74	6.94	3.99	6.11	5.02	3.89	2.74	2.97	3.41	4
108	1587933	AA839275	0.61	2.38	3.91	2.08	5.00	4.77	3.69	6.17	1.75	4
109	144747	R76247	0.43	1.67	3.89	9.05	3.34	1.44	1.37	4.41	3.71	4
110	321386	W32272	1.23	4.75	3.84	5.19	5.74	3.81	2.10	3.38	2.84	4
111	725285	AA291742	0.05	0.19	3.78	2.57	4.47	5.19	3.29	7.01	0.18	4
112	258404	N25883	0.28	1.07	3.78	6.40	3.53	3.79	6.85	1.28	0.83	4
113	268692	N25920	1.81	6.68	3.70	2.93	4.18	2.58	3.38	4.60	4.50	4
114	283995	N53378	0.93	3.42	3.66	2.34	3.33	3.82	2.44	4.10	5.95	4
115	359781	AA011320	3.58	13.06	3.65	4.67	5.61	2.55	4.74	3.85	0.49	4
116	854701	AA630104	0.98	3.56	3.65	2.92	5.15	3.36	5.17	4.30	1.00	4
117	248886	H82081	0.83	3.03	3.65	4.16	2.79	3.62	5.06	3.32	2.93	4
118	771053	AA427528	10.52	38.08	3.62	3.55	5.47	3.81	5.38	2.39	1.11	4
119	488010	AA045709	0.98	3.54	3.60	1.73	6.29	3.11	1.20	3.29	5.98	4
120	112482	T80980	11.33	40.58	3.58	1.21	4.61	5.01	4.80	4.57	1.28	4
121	86035	T62842	0.03	0.10	3.58	5.81	3.02	3.15	2.19	2.78	4.53	4
122	855632	AA684104	0.96	3.38	3.52	2.09	3.77	3.88	1.92	5.82	3.66	4
123	811914	AA454988	2.96	10.39	3.51	3.92	5.10	3.87	3.79	2.79	1.62	4
124	281371	N47888	0.36	1.25	3.49	5.39	3.04	3.53	2.17	2.42	4.40	4
125	363823	AA704650	9.01	31.38	3.48	2.44	3.12	4.85	1.73	3.48	5.29	4
126	385400	AA757401	2.20	7.66	3.48	2.26	5.31	3.00	4.08	4.15	2.06	4
127	138507	R63253	1.41	4.88	3.47	1.74	4.81	3.90	3.23	4.16	2.95	4
128	289071	N63809	19.65	68.00	3.46	3.37	5.09	1.36	1.59	6.09	3.28	4
129	460203	AA677461	0.55	1.89	3.45	1.61	4.23	4.13	4.28	4.93	1.55	4
130	242061	H83335	2.71	9.21	3.40	5.12	6.73	3.43	3.25	0.92	0.95	4
131	207098	H48502	0.16	0.53	3.38	3.02	4.77	3.04	2.28	4.65	2.52	4
132	396839	AA758154	0.68	2.24	3.36	1.87	5.62	3.24	4.60	1.60	3.25	4
133	209381	H64095	0.97	3.25	3.35	2.04	3.28	4.07	1.86	4.90	3.98	4

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/ eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples
134	23897	R38364	1.24	3.28	1.98	3.91	5.86	3.28	1.47	3.16	4
135	1467905	AA883504	3.84	3.27	1.87	3.82	4.55	3.37	3.97	2.04	4
136	1656526	AA935580	3.77	3.21	3.58	5.88	3.20	0.99	4.48	1.12	4
137	491418	AA115537	1.72	3.20	1.82	3.32	2.46	4.38	3.33	3.88	4
138	744001	AA628039	12.24	3.17	1.60	3.05	3.27	4.18	5.11	1.80	4
139	293110	N63848	10.70	3.17	2.38	3.94	3.44	3.86	3.55	1.84	4
140	782047	AA429802	3.67	3.14	3.26	2.51	3.73	2.89	3.22	3.21	4
141	454689	AA677206	3.16	3.08	2.09	3.15	1.69	3.87	3.10	4.59	4
142	384293	AA709370	1.53	3.05	4.26	3.84	4.05	3.20	1.06	1.87	4
143	34091	R44132	1.63	3.04	2.04	3.94	3.79	3.14	3.71	1.62	4
144	743362	AA400385	0.09	3.02	3.33	3.10	2.05	4.16	0.88	4.58	4
145	128785	R10015	3.44	3.02	2.11	2.81	3.08	3.17	3.53	3.40	4
146	429289	AA007370	3.83	2.98	3.22	3.29	1.89	3.35	2.22	3.94	4
147	136819	R38465	1.37	2.94	3.15	2.95	3.25	3.12	1.85	3.33	4
148	433350	AA700604	123.16	2.88	3.66	5.22	3.12	1.22	0.47	3.55	4
149	755276	AA486349	0.30	2.74	3.57	4.62	3.03	1.81	0.36	3.03	4
150	270917	N32514	0.23	25.92	3.34	1.13	1.13	14.34	134.44	1.13	3
151	782233	AA431721	3.10	15.42	64.92	1.22	0.11	0.61	3.63	22.02	3
152	320495	W16659	0.86	13.99	1.39	3.75	0.97	71.36	3.78	2.68	3
153	293579	N94111	12.90	13.42	0.73	1.52	4.77	26.47	44.95	2.05	3
154	281039	N47717	9.89	12.85	43.16	25.22	5.01	2.22	0.30	1.22	3
155	490718	AA115761	0.46	12.37	46.34	6.67	1.83	0.27	18.31	0.82	3
156	796747	AA443147	0.92	11.12	0.12	0.12	2.23	55.00	5.81	3.44	3
157	287728	N59158	5.43	10.69	20.89	31.93	7.51	1.25	0.86	1.67	3
158	282089	N48259	19.34	10.17	21.89	29.40	4.51	1.88	1.07	2.28	3
159	731280	AA116627	33.97	8.32	14.84	26.99	1.81	1.28	0.78	4.21	3
160	470216	AA028987	23.62	8.02	1.97	4.75	1.05	5.39	32.26	2.68	3
161	375827	AA039851	0.57	7.75	3.54	3.42	1.63	1.38	34.08	2.42	3
162	277714	N49577	0.94	7.33	0.87	3.83	1.15	32.30	5.88	0.12	3
163	757451	AA437241	3.37	7.13	4.67	30.78	1.10	3.88	0.99	1.36	3
164	486035	AA040861	35.89	6.84	2.41	4.29	2.60	21.59	8.58	1.59	3
165	298417	N74131	0.48	6.33	13.15	16.83	1.72	1.58	1.47	3.24	3
166	666218	AA233809	0.23	6.24	1.91	7.96	4.25	20.28	2.26	0.81	3
167	757369	AA437142	0.11	5.76	1.70	4.23	0.85	4.75	0.59	22.68	3

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples		
168	198168	R92362	0.59	3.32	5.60	1.71	1.65	2.16	16.65	4.09	7.34	3
169	687667	AA235370	0.81	4.56	5.59	5.88	18.59	4.47	1.32	1.05	2.26	3
170	712950	AA282273	5.93	32.98	5.56	6.81	14.24	8.62	0.72	0.88	2.12	3
171	504761	AA148735	0.08	0.43	5.45	6.26	0.51	7.72	0.13	17.97	0.10	3
172	322443	W16424	0.23	1.23	5.30	3.13	4.09	0.73	20.36	0.89	2.62	3
173	35010	R45118	0.66	3.31	5.03	2.72	4.85	2.60	1.65	11.48	6.86	3
174	782537	AA448484	1.72	8.60	5.01	2.52	2.75	8.08	0.99	7.48	8.28	3
175	277596	N57002	1.48	7.34	4.97	7.68	12.12	2.17	0.90	1.13	5.84	3
176	773208	AA425650	9.71	47.09	4.85	1.82	1.90	6.84	12.13	2.89	3.52	3
177	364885	AA035745	0.44	2.09	4.78	1.52	1.24	13.33	0.96	7.22	4.39	3
178	247587	N58136	0.01	0.05	4.64	1.96	14.29	1.91	4.85	3.94	0.89	3
179	34888	R19878	0.14	0.67	4.62	5.69	9.05	6.74	1.93	1.66	2.65	3
180	72395	T51539	0.08	0.36	4.59	0.67	16.34	4.47	1.37	4.55	0.13	3
181	773204	AA425682	12.74	58.08	4.56	1.47	1.49	5.37	13.00	2.45	3.58	3
182	277327	N57483	0.02	0.09	4.56	1.67	6.21	2.55	8.18	1.05	7.68	3
183	770068	AA430545	7.38	33.36	4.52	7.28	8.45	8.19	0.54	0.26	2.38	3
184	51620	H18446	0.03	0.12	4.49	1.90	8.33	7.29	6.63	2.43	0.38	3
185	266343	N26556	0.70	3.10	4.44	8.62	9.86	4.53	0.84	0.94	1.83	3
186	296170	W02428	0.43	1.67	4.40	4.09	12.69	6.34	0.91	1.09	1.27	3
187	278504	N68139	0.05	0.22	4.34	0.98	7.96	1.80	5.23	1.24	8.83	3
188	526567	AA128407	0.02	0.07	4.33	3.30	1.67	0.98	9.74	0.64	9.67	3
189	809526	AA454570	0.06	0.28	4.33	10.35	0.16	0.26	2.13	8.96	4.11	3
190	292958	N68499	0.05	0.22	4.31	0.46	1.96	0.68	3.72	15.21	3.80	3
191	295997	N73563	0.42	1.81	4.28	7.32	9.76	3.67	2.18	1.01	1.74	3
192	205628	H57585	0.51	2.18	4.28	7.69	2.40	5.57	1.26	1.92	6.79	3
193	67397	T49325	0.01	0.06	4.16	5.29	7.99	0.68	0.90	0.68	9.45	3
194	811028	AA485373	4.96	20.42	4.12	3.45	0.81	2.68	7.56	1.37	8.82	3
195	489637	AA101878	2.86	11.62	4.06	3.07	1.98	7.47	8.01	2.44	1.39	3
196	284824	N64796	1.58	6.38	4.03	2.09	6.18	6.46	2.24	5.69	1.52	3
197	841507	AA487385	1.06	4.28	4.02	10.98	2.50	4.10	3.36	1.15	2.06	3
198	882497	AA676604	0.04	0.14	3.84	0.28	7.63	0.28	9.35	0.79	5.34	3
199	280155	N47012	0.06	0.25	3.92	2.52	2.29	7.11	2.63	4.99	4.00	3
200	1466768	AA863735	0.46	1.79	3.90	2.93	3.44	5.26	7.90	1.68	2.22	3
201	784589	AA443300	0.03	0.10	3.89	3.05	1.55	3.64	1.86	1.93	11.30	3



Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumor Samples
202	723972	AA292583	0.01	0.05	3.91	7.78	8.70	0.74	0.74	3
203	858174	AA630620	0.03	0.11	6.41	6.16	0.35	1.33	8.10	3
204	782575	AA447522	0.36	1.39	8.55	7.01	0.65	0.88	3.47	3
205	428168	AA001870	2.28	8.77	1.91	3.10	10.12	1.60	1.78	3
206	588326	AA130857	1.17	4.49	2.76	2.15	8.17	4.00	3.75	3
207	730838	AA417012	0.02	0.08	7.50	0.49	7.80	2.29	4.30	3
208	837953	AA458578	7.85	29.78	3.76	5.93	2.48	8.88	2.82	3
209	503824	AA133959	0.12	0.44	1.62	0.09	8.89	5.74	6.57	3
210	208210	H85286	0.89	3.34	5.28	5.92	1.89	0.76	1.61	3
211	427986	AA001841	0.11	0.43	3.08	1.05	3.88	0.51	11.00	3
212	123755	R01304	1.84	6.90	0.50	0.29	4.24	12.61	4.50	3
213	436153	AA703249	14.14	52.21	1.02	1.89	8.23	5.06	2.80	3
214	143062	R71335	0.44	1.61	2.83	6.04	2.67	3.32	4.58	3
215	131599	R23727	0.16	0.60	5.05	2.39	1.07	4.57	6.14	3
216	240151	H82706	2.33	8.49	2.83	0.64	4.91	6.33	5.22	3
217	452116	AA707219	0.44	1.61	2.41	7.49	2.29	3.82	2.52	3
218	201125	R98472	1.05	3.81	3.93	4.00	6.14	2.91	2.55	3
219	126713	R07115	0.27	0.98	6.64	4.18	4.29	1.20	2.78	3
220	768179	AA424849	2.56	9.08	3.04	3.99	2.78	7.17	2.61	3
221	250878	H95976	4.09	14.42	2.95	6.36	3.77	2.33	2.51	3
222	273498	N33263	0.09	0.32	3.88	2.67	6.21	4.11	1.47	3
223	765765	AA496455	1.95	6.84	3.51	3.80	7.92	1.84	1.82	3
224	815047	AA465186	2.68	9.34	3.49	1.60	4.71	3.01	7.18	3
225	364670	AA708333	4.17	14.53	3.11	2.41	7.25	2.34	2.03	3
226	762200	AA431964	1.53	5.30	2.48	6.32	3.94	2.26	3.29	3
227	52730	H29500	6.64	22.94	2.33	2.11	6.25	3.48	2.49	3
228	125311	R05810	1.92	6.62	1.07	2.84	6.68	4.33	2.05	3
229	770880	AA434404	8.05	27.68	6.26	3.15	1.10	0.49	1.77	3
230	786268	AA460827	0.55	1.89	1.43	3.68	5.27	5.89	1.71	3
231	204146	H55920	2.07	7.07	2.91	3.75	4.16	1.12	1.39	3
232	811373	AA176833	0.01	0.04	9.82	3.38	3.86	0.80	0.90	3
233	325380	AA284285	0.01	0.03	1.86	1.13	5.41	1.13	5.09	3
234	434822	AA703114	0.80	2.72	5.38	1.97	1.12	1.56	6.01	3
235	1049033	AA776675	1.87	6.35	4.98	4.75	4.55	1.19	1.94	3

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM124/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(NPM125/AveBPH)	# of Tumor Samples
236	882483	2.75	9.30	3.38	1.34	4.86	2.89	5.81	3.78	1.72	3
237	787130	0.49	1.67	3.38	1.02	0.74	1.14	3.10	10.17	4.12	3
238	128321	0.03	0.10	3.38	2.12	4.44	3.73	7.41	0.36	2.21	3
239	230440	0.07	0.22	3.37	1.97	3.57	3.44	2.89	8.21	0.15	3
240	824271	6.78	22.81	3.36	3.53	3.85	2.87	5.02	2.93	1.98	3
241	123265	2.30	7.72	3.35	4.22	9.13	4.42	0.68	0.98	0.68	3
242	357238	0.72	2.40	3.35	5.78	2.69	1.43	1.48	3.53	5.19	3
243	123331	1.03	3.43	3.33	2.37	4.72	5.68	0.96	3.48	2.80	3
244	240894	1.85	6.17	3.33	2.79	3.07	1.59	7.73	3.58	1.21	3
245	347182	0.02	0.07	3.32	0.45	5.03	5.53	4.94	2.81	1.19	3
246	52092	0.03	0.11	3.31	1.84	4.36	6.28	4.13	2.87	0.31	3
247	160628	0.41	1.38	3.30	2.02	4.53	3.17	4.45	2.72	2.93	3
248	1505294	1.11	3.68	3.30	1.98	2.43	7.21	1.55	3.28	3.34	3
249	282053	7.69	25.26	3.28	2.38	3.42	3.49	6.75	1.98	1.68	3
250	741087	17.59	57.78	3.28	2.99	3.39	3.14	2.34	2.25	5.58	3
251	490178	3.50	11.46	3.28	2.64	4.34	2.28	4.85	1.83	3.72	3
252	208741	0.09	0.30	3.26	2.00	4.61	3.24	2.64	2.82	4.27	3
253	416811	3.83	11.85	3.26	2.01	2.14	2.13	5.36	4.86	3.07	3
254	416092	0.50	1.62	3.26	2.00	2.31	1.93	3.05	3.65	6.82	3
255	221581	0.55	1.79	3.26	1.18	1.35	3.60	1.43	6.94	5.05	3
256	223274	0.05	0.17	3.25	3.24	0.19	0.19	2.95	5.14	7.79	3
257	44387	1.17	3.78	3.24	6.87	2.69	4.15	1.74	3.08	1.08	3
258	110787	0.25	0.80	3.23	2.49	3.52	2.19	3.80	2.05	5.34	3
259	121948	4.17	13.48	3.23	1.59	4.12	2.42	5.41	3.80	2.03	3
260	782812	0.06	0.18	3.22	4.87	5.06	1.22	2.93	3.17	2.10	3
261	145513	0.87	2.16	3.22	1.90	4.01	2.67	3.29	2.89	4.45	3
262	435319	6.14	19.70	3.21	2.30	5.27	1.85	3.83	2.74	3.25	3
263	210698	1.41	4.52	3.21	1.59	2.24	3.47	5.80	5.20	0.95	3
264	197067	0.38	1.16	3.19	1.88	1.56	3.78	3.20	2.11	6.62	3
265	416374	3.18	10.13	3.19	4.89	3.63	2.43	2.00	3.28	2.91	3
266	1422794	2.02	8.43	3.18	2.60	3.91	2.60	5.88	1.08	3.06	3
267	137017	0.03	0.08	3.18	1.47	4.27	1.59	8.08	3.23	0.45	3
268	267634	0.21	0.66	3.18	2.32	3.85	2.53	3.68	3.77	2.82	3
269	433253	5.61	17.79	3.17	4.18	4.57	2.43	1.60	1.72	4.54	3

Table 2-1.T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
270	1475734	7.39	23.26	3.15	3.45	3.26	2.34	2.32	2.73	4.79	3
271	268876	0.51	1.59	3.14	1.46	6.62	3.35	1.36	3.88	2.19	3
272	79032	15.17	47.49	3.13	3.66	4.92	3.98	1.33	2.11	2.80	3
273	771023	1.12	3.51	3.13	2.45	3.57	2.85	2.35	3.41	4.13	3
274	811101	2.17	6.72	3.09	1.06	2.45	1.78	5.54	4.38	3.37	3
275	270127	0.66	2.04	3.09	3.94	3.31	2.15	1.27	5.53	2.34	3
276	448117	2.65	8.16	3.08	3.50	2.77	3.84	5.73	1.36	1.27	3
277	796874	0.48	1.46	3.07	2.06	2.12	3.31	5.09	3.43	2.39	3
278	431296	0.48	1.47	3.05	1.65	4.32	2.32	3.80	1.77	4.45	3
279	214824	1.92	5.87	3.05	2.21	3.82	1.69	1.33	5.44	3.82	3
280	743323	0.49	1.50	3.04	4.39	4.19	1.69	1.95	2.28	3.78	3
281	80050	12.72	38.66	3.04	1.01	1.73	3.23	4.87	5.49	1.91	3
282	1500162	1.99	5.73	3.04	2.12	4.97	1.27	4.24	1.94	3.69	3
283	268234	1.72	5.20	3.03	2.45	3.22	5.41	2.32	1.71	3.06	3
284	198823	0.51	1.54	3.03	2.99	4.10	3.93	3.02	2.70	1.44	3
285	41305	19.83	60.07	3.03	2.41	3.80	2.96	4.40	3.55	1.06	3
286	795555	1.63	4.94	3.03	3.06	5.11	2.63	4.91	1.14	1.32	3
287	416808	0.57	1.71	3.02	1.77	4.00	2.37	4.02	3.51	2.42	3
288	242688	1.16	3.50	3.00	1.70	2.11	3.21	4.15	4.88	1.97	3
289	364352	0.03	0.08	3.00	2.52	0.38	4.22	3.89	4.83	2.18	3
290	244050	0.06	0.17	3.00	1.60	3.79	1.68	2.22	3.29	5.43	3
291	544839	1.05	3.15	2.98	1.72	3.77	3.39	3.80	2.66	2.58	3
292	852520	17.95	53.54	2.98	3.39	3.07	2.81	4.99	2.83	0.82	3
293	797000	0.11	0.33	2.98	1.54	3.21	1.65	5.62	1.07	4.77	3
294	1493252	18.18	54.08	2.98	4.82	3.25	2.81	3.26	1.52	2.20	3
295	447416	1.15	3.41	2.96	5.58	4.11	2.12	1.04	3.10	1.84	3
296	1475308	1.54	4.58	2.96	2.92	3.27	4.53	1.90	1.93	3.19	3
297	194134	0.22	0.65	2.95	1.35	3.39	3.86	2.74	3.89	2.47	3
298	1458937	1.15	3.38	2.94	5.57	3.38	1.71	2.34	0.80	3.84	3
299	201039	0.83	2.42	2.93	2.76	3.98	2.31	3.06	2.04	3.43	3
300	263769	0.75	2.19	2.93	3.82	7.88	3.41	1.10	1.06	0.29	3
301	427930	0.05	0.14	2.91	0.99	3.14	6.49	0.21	4.44	2.22	3
302	307244	0.35	1.01	2.91	2.20	4.92	3.17	2.07	3.85	1.25	3
303	810843	0.06	0.17	2.90	1.34	3.15	1.41	5.64	4.41	1.44	3

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/ AveBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples
304	1460820	AA889785	3.62	10.49	2.90	2.35	2.11	3.29	1.57	3
305	26259	R20547	0.87	2.50	2.89	3.08	3.41	3.69	2.10	3
306	366154	AA062813	0.01	0.03	2.85	3.87	3.77	1.00	1.23	3
307	282104	N51498	0.93	2.86	2.84	2.66	4.75	3.79	1.52	3
308	344308	W70147	0.46	1.31	2.81	3.18	3.47	5.50	1.78	3
309	45525	H08725	2.19	6.17	2.81	2.20	3.24	3.18	3.52	3
310	196303	R82435	0.04	0.11	2.80	2.56	4.53	3.04	2.46	3
311	267495	N25262	1.59	4.40	2.77	3.68	3.24	2.59	3.41	3
312	757198	AA498133	0.65	1.78	2.75	3.73	4.67	3.45	1.24	3
313	204122	H81888	1.31	3.59	2.75	2.36	4.23	3.40	3.07	3
314	839545	AA489791	0.42	1.14	2.73	5.37	0.99	1.38	1.18	3
315	809894	AA454702	0.02	0.05	2.70	0.54	0.56	3.30	2.89	3
316	128234	R06362	0.30	0.81	2.69	2.13	3.70	2.31	1.13	3
317	280407	N51563	0.97	2.82	2.69	1.61	3.40	1.91	3.26	3
318	758284	AA404231	0.78	2.08	2.67	1.82	2.31	1.16	3.46	3
319	150314	H00817	2.18	5.81	2.67	3.69	3.80	3.23	2.04	3
320	288936	N82696	0.04	0.11	2.67	1.59	3.47	3.00	0.99	3
321	757440	AA437226	0.05	0.13	2.67	0.21	4.19	1.79	4.52	3
322	176554	H45289	0.87	2.28	2.64	1.89	2.02	3.72	3.33	3
323	298057	N69989	0.68	1.79	2.62	2.03	3.01	2.54	1.85	3
324	755299	AA496359	1.69	4.39	2.60	4.47	0.52	1.93	3.99	3
325	725321	AA291749	0.87	2.27	2.59	3.21	3.07	3.61	2.30	3
326	1467831	AA883431	1.17	3.02	2.59	1.16	1.22	4.32	0.72	3
327	120097	T95151	0.80	1.54	2.58	2.09	2.01	1.14	3.96	3
328	159455	H15746	0.02	0.04	2.58	0.62	3.70	2.31	0.64	3
329	1460898	AA868802	6.57	16.82	2.56	1.39	3.08	1.94	2.32	3
330	757368	AA437126	0.02	0.06	2.55	3.92	2.20	3.37	0.77	3
331	450812	AA682452	0.74	1.89	2.55	1.17	0.96	0.92	3.00	3
332	342543	W68141	0.02	0.04	2.53	4.17	4.44	0.58	1.17	3
333	503741	AA131468	1.05	2.65	2.53	3.31	3.85	3.58	1.37	3
334	784130	AA432075	17.73	44.77	2.52	3.17	4.60	0.76	1.56	3
335	325370	W52208	0.03	0.08	2.51	3.68	3.87	2.82	1.13	3
336	288663	N62394	0.78	1.95	2.50	3.07	3.96	0.85	1.90	3
337	344359	W73377	0.07	0.18	2.46	0.90	3.52	0.14	3.08	3

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
338	53391	1.15	2.79	2.41	3.60	3.57	3.34	1.40	1.23	1.35	3
339	429823	0.14	0.35	2.40	3.16	3.19	1.82	1.85	1.06	3.55	3
340	258242	0.62	1.49	2.40	3.61	3.23	0.26	4.12	0.85	2.32	3
341	255897	0.09	0.20	2.31	0.60	4.21	1.00	1.52	3.40	3.14	3
342	452068	0.88	2.03	2.30	1.29	3.24	1.70	3.19	3.01	1.39	3
343	585779	20.69	48.64	2.25	2.43	3.80	0.16	3.57	0.38	3.18	3
344	128506	0.04	0.09	2.15	1.20	3.87	0.24	3.30	0.24	4.05	3
345	839048	0.36	0.76	2.12	4.12	3.45	0.42	3.04	0.88	0.82	3
346	280763	0.03	0.50	14.36	0.58	2.77	2.38	1.76	4.85	73.83	2
347	590853	0.01	0.18	13.25	0.74	0.74	1.98	0.74	42.46	32.88	2
348	951101	0.02	0.22	11.30	1.40	0.82	3.37	1.36	2.48	58.40	2
349	377610	0.13	1.34	10.02	1.46	2.93	2.36	49.00	1.07	3.31	2
350	50787	0.06	0.50	7.90	1.60	0.16	2.38	2.67	34.78	5.82	2
351	137984	0.29	2.25	7.79	8.43	33.82	0.37	0.56	1.11	2.44	2
352	858585	0.12	0.84	7.77	1.46	0.70	1.19	9.43	32.14	1.71	2
353	358890	0.06	0.49	7.64	1.97	2.74	4.55	0.24	35.70	0.68	2
354	430192	0.10	0.75	7.47	33.12	2.43	1.19	3.78	1.47	2.84	2
355	151477	1.19	8.16	6.87	7.32	29.35	1.05	0.49	0.46	2.55	2
356	81331	0.47	3.19	6.81	15.33	19.31	2.50	1.64	0.68	1.40	2
357	52026	0.25	1.66	6.69	13.67	22.88	0.57	1.63	1.01	0.38	2
358	859827	0.08	0.53	6.43	1.07	0.12	0.12	0.52	31.38	5.38	2
359	428088	0.22	1.39	6.27	0.88	0.41	0.36	1.35	18.46	16.17	2
360	284449	0.06	0.32	5.48	6.98	2.35	1.09	0.55	1.30	20.80	2
361	764358	8.25	44.96	5.45	2.04	2.77	1.77	2.77	11.30	12.03	2
362	768226	0.06	0.31	5.18	1.16	22.31	1.49	3.68	0.91	1.50	2
363	303139	0.52	2.71	5.17	4.05	23.41	0.96	1.45	0.13	0.98	2
364	757165	0.03	0.16	5.09	0.47	1.51	0.94	20.25	2.06	5.30	2
365	565235	18.25	89.08	4.88	7.86	14.43	2.52	1.47	0.61	2.40	2
366	247103	0.05	0.22	4.82	3.70	1.71	1.84	0.22	2.88	18.58	2
367	234376	2.94	14.16	4.81	1.46	2.58	4.82	2.82	14.34	2.86	2
368	758405	0.04	0.21	4.73	0.22	1.45	2.24	3.15	2.40	18.90	2
369	47355	0.10	0.48	4.65	14.30	0.10	0.55	0.22	9.95	2.80	2
370	377898	3.49	15.28	4.38	5.72	2.44	11.68	1.29	2.30	2.82	2
371	745072	0.45	1.95	4.32	6.41	14.50	1.23	1.41	1.47	0.93	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM126/AveBPH)	# of Tumor Samples
372	79763	0.16	0.71	4.32	1.17	7.49	1.07	1.48	0.06	14.84
373	429424	0.03	0.14	4.20	2.13	15.88	0.30	1.79	0.93	4.17
374	265655	0.09	0.39	4.17	16.86	1.24	1.97	4.20	0.56	0.11
375	1606315	0.72	3.01	4.16	2.17	2.93	3.20	13.79	1.44	1.42
376	1359018	0.05	0.20	4.11	11.10	10.86	0.50	0.52	0.21	1.46
377	283335	0.18	0.72	4.00	1.22	10.53	5.88	2.87	1.88	1.99
378	284931	0.02	0.07	3.89	2.68	8.36	0.83	0.57	0.92	10.57
379	1031203	0.03	0.11	3.86	1.17	0.36	5.13	1.84	0.36	15.08
380	758360	0.03	0.13	3.85	0.30	0.30	2.16	4.17	0.30	16.49
381	178569	0.05	0.20	3.85	3.16	3.00	2.59	2.97	1.40	10.58
382	154477	1.01	3.95	3.82	2.32	1.75	3.10	1.67	2.16	12.53
383	1048998	0.14	0.57	3.91	10.73	5.86	2.96	2.22	1.03	0.56
384	129589	0.44	1.66	3.79	2.77	13.43	1.09	0.93	3.45	1.09
385	1055636	0.19	0.72	3.75	3.32	2.92	2.59	2.72	1.71	9.27
386	461699	10.27	38.51	3.75	0.81	2.56	2.98	8.45	6.06	1.64
387	50892	0.31	1.18	3.74	1.87	2.97	2.88	2.21	5.65	6.87
388	362926	1.07	4.00	3.74	2.76	5.27	1.60	11.37	0.71	0.71
389	122178	0.03	0.11	3.69	0.65	8.21	0.34	1.94	0.20	10.81
390	246808	0.56	2.06	3.68	6.45	12.29	1.20	0.84	0.52	0.85
391	191866	0.81	2.24	3.68	2.33	6.76	2.63	2.88	5.39	1.99
392	155072	0.30	1.07	3.62	7.00	9.56	2.16	0.92	0.72	1.33
393	190325	0.70	2.51	3.59	2.78	2.71	2.31	2.92	7.51	3.33
394	502436	1.10	3.94	3.58	1.28	2.12	2.17	7.62	1.52	6.75
395	263889	0.01	0.03	3.57	6.95	1.08	1.08	1.03	10.16	1.08
396	1486752	0.70	2.48	3.57	1.94	3.07	2.18	10.40	1.10	2.70
397	510136	0.03	0.10	3.52	6.17	0.37	7.88	1.98	1.85	2.87
398	878264	2.85	9.83	3.45	1.42	1.16	2.71	7.18	5.86	2.39
399	321470	1.07	3.68	3.45	3.79	2.25	7.49	2.62	2.54	1.99
400	287866	1.24	4.26	3.44	2.88	4.98	2.73	1.12	7.17	1.77
401	258300	5.10	17.12	3.38	2.43	3.55	2.76	7.36	2.52	1.53
402	1048646	0.92	3.08	3.35	1.96	2.72	3.67	2.29	2.53	6.91
403	289025	0.55	1.82	3.35	2.20	5.29	1.81	6.92	1.99	1.86
404	261706	0.53	1.77	3.33	4.14	1.81	8.88	2.13	1.50	1.49
405	1031568	0.08	0.25	3.30	6.36	2.97	1.77	2.61	1.62	4.45

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/ eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples	
406	383876	AA878116	0.13	0.41	3.28	7.55	3.06	2.77	2.09	2.39	1.81	2
407	310483	W31074	6.22	20.37	3.28	2.57	2.10	2.21	4.55	5.37	2.84	2
408	84713	T74257	0.07	0.21	3.27	6.85	6.18	2.97	2.76	0.15	0.89	2
409	219955	H81817	0.19	0.61	3.24	0.75	0.51	0.73	12.99	4.14	0.35	2
410	295741	W02483	0.35	1.13	3.23	2.04	2.14	1.85	2.27	4.35	6.93	2
411	796848	AA480115	8.12	29.44	3.23	1.38	0.93	1.89	8.52	1.58	5.09	2
412	44253	H05818	0.06	0.21	3.23	1.53	1.21	0.82	3.86	1.48	10.66	2
413	138051	R82928	0.44	1.43	3.23	2.91	2.95	4.57	2.09	3.85	2.98	2
414	454543	AA677023	0.83	2.67	3.22	0.89	1.39	2.00	10.50	3.02	1.53	2
415	49315	H15368	0.22	0.71	3.21	0.69	1.60	1.44	5.55	7.72	2.25	2
416	346812	W74482	1.22	3.89	3.17	2.86	9.86	0.85	1.50	3.24	0.62	2
417	263836	H99766	1.11	3.52	3.17	2.49	4.47	2.58	6.63	1.43	1.53	2
418	376793	AA048883	0.72	2.28	3.15	7.40	1.58	1.99	4.43	2.52	0.96	2
419	283617	N52875	1.18	3.69	3.13	0.71	1.64	1.65	7.85	4.94	2.01	2
420	1684274	AI003028	1.45	4.54	3.13	5.71	7.10	2.75	1.53	0.65	1.08	2
421	784212	AA446884	1.91	5.95	3.11	2.46	2.18	2.50	3.56	6.73	1.25	2
422	41214	R56898	0.03	0.11	3.11	0.98	3.88	1.59	2.55	0.17	9.50	2
423	361688	W86197	0.03	0.08	3.10	7.63	1.12	4.50	2.52	0.37	2.46	2
424	149013	R82299	7.60	23.51	3.09	0.77	1.07	3.65	8.67	2.39	2.00	2
425	392399	AA707935	0.52	1.59	3.09	2.36	2.84	2.93	2.19	4.07	4.03	2
426	347615	W81528	0.07	0.20	3.08	12.89	0.30	0.88	3.29	0.17	0.99	2
427	1030779	AA809004	0.52	1.61	3.08	1.29	1.48	1.52	1.66	4.08	8.48	2
428	364555	AA022801	1.84	5.67	3.07	5.36	2.73	1.58	1.33	5.86	1.60	2
429	743688	AA629324	1.27	3.90	3.07	2.60	2.21	5.26	5.17	1.89	1.28	2
430	141726	R89584	0.04	0.13	3.07	8.46	2.87	3.49	1.95	1.40	0.24	2
431	786147	AA460986	2.96	9.08	3.07	2.49	2.65	2.36	1.77	4.31	4.82	2
432	813501	AA456078	0.60	1.95	3.07	1.76	2.60	4.93	1.72	2.04	5.35	2
433	138047	R53757	0.35	1.07	3.04	2.90	1.81	2.18	2.33	4.18	4.86	2
434	22600	T87235	0.12	0.37	3.04	3.96	5.88	1.86	2.92	2.46	1.15	2
435	201818	H48318	0.16	0.48	3.04	2.44	5.47	4.57	1.88	2.74	1.14	2
436	345761	W72671	0.92	2.80	3.04	2.84	5.24	1.48	2.88	3.18	2.50	2
437	42747	R61847	0.22	0.67	3.03	1.17	1.54	1.10	9.90	3.38	1.07	2
438	743230	AA400234	8.50	25.66	3.02	2.49	2.16	1.72	2.64	4.52	4.58	2
439	261580	H86694	8.42	25.35	3.01	2.74	2.82	1.36	2.36	4.05	4.73	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
440	357828	0.12	0.37	3.01	3.08	1.37	2.01	2.27	8.10	1.23	2
441	701766	4.22	12.71	3.01	1.74	5.33	2.67	2.63	1.83	3.85	2
442	195487	1.07	3.20	3.00	2.24	4.24	1.57	2.77	4.46	2.74	2
443	480164	0.44	1.32	2.99	1.42	2.73	1.76	5.99	1.25	4.80	2
444	788239	1.47	4.37	2.98	4.17	6.87	1.67	2.47	1.68	1.06	2
445	365813	0.06	0.18	2.97	2.12	6.90	4.61	0.14	1.16	2.91	2
446	346889	7.57	22.52	2.97	2.25	2.76	2.96	4.30	1.85	3.91	2
447	143790	2.09	6.21	2.97	2.52	2.84	4.48	3.12	2.73	2.14	2
448	50530	0.35	1.04	2.96	1.02	2.38	3.99	6.14	1.71	2.52	2
449	208082	4.22	12.48	2.96	2.26	6.36	4.67	0.81	2.48	1.18	2
450	490525	0.07	0.20	2.95	0.16	1.59	1.71	0.15	10.45	3.62	2
451	284157	0.09	0.26	2.95	4.52	5.80	2.25	0.12	2.94	2.05	2
452	133440	1.72	5.05	2.94	2.28	2.49	5.90	3.21	1.50	2.23	2
453	416889	0.52	1.52	2.92	1.91	5.15	1.53	1.35	4.77	2.83	2
454	271076	2.08	6.09	2.92	4.05	4.90	2.04	1.62	2.55	2.38	2
455	452320	1.07	3.13	2.92	2.22	2.90	3.07	2.67	2.16	4.48	2
456	814798	25.12	73.30	2.92	3.83	7.12	2.07	1.26	1.66	1.56	2
457	417908	5.97	17.42	2.92	2.62	6.06	4.81	0.62	2.91	0.47	2
458	745283	5.50	16.00	2.91	2.17	1.35	2.45	5.86	1.50	4.13	2
459	50772	10.55	30.44	2.89	3.09	5.75	2.83	1.37	2.12	2.15	2
460	51806	0.88	1.96	2.88	2.55	3.73	2.18	2.15	3.99	2.70	2
461	204684	0.83	2.38	2.86	1.27	2.47	4.88	4.06	2.59	2.03	2
462	731002	1.11	3.20	2.87	2.09	3.10	2.56	2.78	4.25	2.46	2
463	124891	0.85	2.43	2.87	2.66	3.84	2.24	2.82	3.59	2.16	2
464	428138	0.55	1.58	2.87	2.46	3.04	5.16	2.82	2.60	1.11	2
465	45587	1.69	4.82	2.85	2.11	5.17	2.83	1.61	3.34	2.04	2
466	731254	0.05	0.13	2.84	2.74	1.81	1.81	2.21	3.99	4.51	2
467	48055	0.74	2.09	2.84	0.41	0.65	4.40	10.07	0.73	0.75	2
468	626385	29.81	84.34	2.83	2.15	2.80	6.89	1.20	3.18	0.76	2
469	276450	0.47	1.32	2.82	6.04	3.19	1.41	2.46	1.65	2.16	2
470	480435	3.97	11.17	2.82	2.79	3.27	2.34	4.55	2.11	1.85	2
471	41825	0.07	0.21	2.82	0.83	4.13	2.38	0.14	2.29	7.15	2
472	682056	1.86	5.21	2.80	4.23	4.71	2.75	0.67	2.40	2.03	2
473	754406	0.03	0.09	2.78	5.62	0.31	2.16	4.85	1.97	1.67	2



**Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.**

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
474	49844	13.79	38.31	2.78	2.12	2.47	2.22	3.18	4.00	2
475	291222	0.08	0.23	2.77	1.48	3.14	4.59	2.82	1.71	2
476	789857	1.25	3.45	2.76	3.20	2.91	2.93	0.95	2.38	2
477	195975	0.59	1.84	2.76	0.99	2.80	4.86	2.49	2.42	2
478	731048	0.02	0.05	2.76	0.58	2.17	0.86	4.74	2.36	2
479	812985	0.87	2.41	2.76	4.36	1.66	2.84	3.65	1.52	2
480	809789	0.17	0.46	2.76	1.66	5.93	2.80	3.44	1.72	2
481	289513	0.02	0.05	2.75	0.51	3.74	2.54	0.51	2.26	2
482	327239	0.50	1.37	2.75	2.08	1.72	3.12	1.74	1.08	2
483	23588	1.07	2.96	2.75	2.22	4.10	3.71	2.22	1.48	2
484	153817	1.27	3.49	2.75	1.72	3.42	2.33	2.85	1.79	2
485	491435	0.28	0.78	2.75	0.83	4.33	2.24	4.29	1.74	2
486	238282	0.12	0.34	2.75	1.13	0.08	0.98	0.55	8.93	2
487	781342	0.08	0.22	2.75	2.79	0.80	1.56	3.17	0.83	2
488	786525	0.81	2.21	2.74	7.49	3.35	0.82	1.98	1.26	2
489	742082	0.13	0.35	2.74	2.57	4.19	4.36	2.31	1.07	2
490	39821	12.95	35.29	2.73	2.05	2.54	2.17	3.06	4.23	2
491	40338	2.39	6.50	2.73	2.54	4.72	4.92	2.58	0.83	2
492	194838	10.30	28.05	2.72	2.21	1.67	1.84	1.82	4.30	2
493	148408	3.58	9.74	2.72	1.80	2.57	3.46	4.97	1.74	2
494	74223	6.45	17.51	2.71	3.86	6.49	1.22	0.80	1.93	2
495	454798	0.71	1.94	2.71	2.51	1.34	3.04	1.20	0.70	2
496	428338	1.30	3.51	2.70	1.67	3.06	2.89	2.48	3.61	2
497	853505	0.52	1.40	2.70	1.84	2.59	3.68	1.98	2.26	2
498	261204	0.05	0.14	2.70	4.16	4.07	1.82	2.64	1.19	2
499	1638971	1.32	3.57	2.69	1.60	2.33	3.00	5.58	1.99	2
500	292399	2.00	5.39	2.69	3.78	4.41	1.27	2.53	1.43	2
501	878281	4.02	10.81	2.69	2.74	3.62	1.27	1.97	4.20	2
502	194364	14.95	40.11	2.68	1.36	3.04	2.45	1.92	4.73	2
503	625924	0.08	0.21	2.68	0.63	2.98	7.53	3.18	0.92	2
504	810328	0.28	0.75	2.67	3.26	2.72	2.12	2.74	2.16	2
505	50114	2.07	5.53	2.67	2.59	6.02	0.45	5.94	0.35	2
506	743731	0.28	0.76	2.67	2.85	1.51	4.67	0.86	4.27	2
507	452047	0.41	1.08	2.67	1.41	6.37	1.25	3.28	1.41	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
508	361587	AA016980	0.88	2.34	2.65	2.25	1.71	1.76	3.99	4.19	2
509	283142	N51335	4.33	11.49	2.65	1.56	0.65	5.68	3.31	2.24	2
510	342721	W88291	0.58	1.53	2.65	1.63	3.17	6.41	1.43	1.03	2
511	530185	AA111969	0.31	0.83	2.65	4.40	2.69	2.49	0.20	2.38	2
512	395809	AA757588	0.03	0.07	2.65	7.24	2.09	1.38	0.84	0.68	2
513	898318	AA598828	2.46	6.52	2.65	3.03	1.15	2.49	1.44	3.00	2
514	241787	H91721	0.16	0.42	2.65	1.72	3.91	1.86	1.88	2.52	2
515	1638108	AI015679	2.30	6.08	2.65	2.96	3.78	1.64	3.28	1.73	2
516	201172	R98487	0.67	1.76	2.65	1.56	2.12	1.90	2.76	3.37	2
517	229280	H83885	0.70	1.86	2.64	1.33	1.64	1.57	4.53	4.38	2
518	342184	W83776	0.04	0.10	2.64	0.60	5.08	1.19	0.26	8.46	2
519	49394	H15655	0.51	1.35	2.64	2.46	2.08	2.86	3.04	0.98	2
520	85320	T71889	6.68	17.60	2.64	1.58	4.01	2.90	3.08	2.30	2
521	115143	T88708	5.36	14.12	2.63	3.65	1.85	1.65	0.94	1.14	2
522	31969	R41994	0.74	1.96	2.63	1.11	1.83	1.88	5.62	4.28	2
523	362402	AA018449	8.88	25.98	2.63	2.80	2.27	3.51	1.03	1.50	2
524	263049	N20046	0.35	0.91	2.63	1.09	1.56	7.15	0.95	0.77	2
525	31299	R42946	0.73	1.92	2.63	1.79	2.41	3.54	2.21	2.76	2
526	62112	T41077	3.92	10.27	2.62	3.22	1.49	3.17	2.47	2.40	2
527	49728	H29198	0.70	1.83	2.61	2.66	3.18	1.50	2.17	3.98	2
528	295723	N68925	2.82	7.37	2.61	2.25	3.72	1.30	2.40	3.25	2
529	447715	AA702781	14.05	36.63	2.61	2.78	1.52	4.68	2.16	1.26	2
530	898070	AA598778	0.92	2.40	2.61	1.58	1.77	2.53	3.64	3.36	2
531	60540	T40531	1.12	2.91	2.60	2.02	2.44	2.01	3.34	3.66	2
532	289999	N82726	3.95	10.29	2.60	2.27	1.45	3.80	2.10	2.06	2
533	290346	N62293	1.53	3.99	2.60	1.93	1.53	4.60	1.96	2.40	2
534	51885	H23187	0.05	0.12	2.59	2.52	1.70	3.83	3.45	2.14	2
535	816124	AA481491	1.93	5.02	2.59	1.28	2.89	3.39	4.11	2.42	2
536	428266	AA004944	0.60	1.56	2.59	1.85	2.85	1.59	3.23	3.47	2
537	51607	H19427	0.15	0.40	2.58	2.50	3.09	0.82	2.24	0.98	2
538	263461	N50647	0.06	0.14	2.58	1.74	0.18	0.37	7.88	3.22	2
539	283190	N51357	0.07	0.19	2.58	1.89	2.69	3.96	0.14	0.92	2
540	74511	T59024	10.71	27.60	2.58	3.63	2.02	4.23	1.30	1.49	2
541	300051	N78927	1.59	4.10	2.57	3.34	0.12	0.68	10.78	0.24	2

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

	IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM124/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	Samples
542	482354	AA705525	1.39	3.59	2.57	0.98	1.51	1.84	3.37	5.79	1.95	2
543	243159	H94471	1.79	4.60	2.57	1.22	1.91	1.52	4.66	4.97	1.15	2
544	824886	AA488893	0.07	0.19	2.57	4.48	2.47	2.87	3.13	1.36	1.13	2
545	884283	AA689750	9.33	23.95	2.57	1.33	1.70	3.19	1.45	5.51	2.23	2
546	260707	H87186	0.37	0.96	2.56	1.71	3.53	2.59	2.31	3.57	1.65	2
547	140197	R66101	0.29	0.74	2.56	2.80	5.19	2.09	0.54	3.25	1.49	2
548	344618	W74725	0.07	0.18	2.56	4.68	2.29	2.79	3.32	1.11	1.17	2
549	270535	N33228	0.49	1.25	2.55	1.19	1.84	3.08	1.95	4.73	2.53	2
550	811023	AA485380	0.22	0.56	2.55	1.72	1.10	1.28	1.41	5.94	3.87	2
551	208413	H62162	0.34	0.86	2.55	3.23	2.89	0.80	1.04	2.81	4.51	2
552	290227	N62271	3.70	9.39	2.54	2.58	3.35	0.81	2.49	3.30	2.72	2
553	305677	N89973	1.10	2.79	2.54	0.77	2.86	1.99	2.48	3.54	3.60	2
554	298554	N70592	2.03	5.15	2.54	2.50	3.69	1.78	4.20	1.46	1.59	2
555	78000	T61938	6.02	15.26	2.54	3.54	2.61	3.14	1.88	1.68	2.38	2
556	321455	W45014	0.57	1.44	2.54	1.44	4.26	1.05	1.58	5.24	1.66	2
557	1458825	AA864704	3.91	9.90	2.53	1.95	1.48	2.26	3.11	2.52	3.89	2
558	798723	AA443140	0.14	0.34	2.53	2.23	3.90	1.93	1.64	4.54	0.95	2
559	85670	T62072	0.80	2.01	2.53	3.12	3.59	1.80	2.56	1.73	2.36	2
560	365738	AA025538	1.74	4.38	2.52	2.94	3.50	1.27	3.56	1.90	1.94	2
561	489722	AA099593	3.24	8.15	2.51	2.69	1.78	3.26	1.83	3.20	2.32	2
562	1468074	AA889397	0.50	1.26	2.51	1.77	1.90	2.87	3.11	3.36	2.05	2
563	252683	H88329	1.39	3.50	2.51	3.86	4.71	0.94	2.23	1.76	1.57	2
564	36393	R25823	11.96	29.92	2.50	3.52	6.33	1.90	1.39	0.86	1.01	2
565	460039	AA676740	2.76	6.89	2.50	1.35	1.80	1.09	4.19	4.77	1.79	2
566	590148	AA158030	0.11	0.27	2.50	2.80	0.09	4.82	2.90	3.11	1.27	2
567	272600	N35922	1.96	4.89	2.50	2.26	3.56	3.63	1.29	2.62	1.61	2
568	345559	W73892	1.10	2.74	2.50	1.43	1.30	2.43	4.87	3.28	1.69	2
569	1461228	AA883299	0.94	2.35	2.49	1.18	1.68	2.43	3.23	3.94	2.48	2
570	487723	AA043552	2.47	6.13	2.48	1.32	2.39	3.08	3.67	2.69	1.75	2
571	436535	AA703048	0.74	1.83	2.48	1.78	1.10	1.39	4.47	3.20	2.86	2
572	823694	AA489839	0.69	1.71	2.48	3.17	2.83	2.41	3.29	1.85	1.34	2
573	130758	R22088	0.48	1.18	2.48	1.01	2.44	2.81	4.55	3.01	1.05	2
574	50635	H17921	0.38	0.93	2.47	2.13	4.23	3.13	2.67	1.93	0.76	2
575	278483	N68132	9.84	24.32	2.47	2.30	3.42	2.22	3.78	1.28	1.84	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples
576	209194	H83952	0.69	2.47	3.23	5.03	0.73	2.49	2.35	1.00	2
577	308466	N95495	7.94	2.47	2.01	3.49	2.05	4.93	1.49	0.85	2
578	785849	AA449120	0.03	2.46	3.20	5.99	1.70	2.59	0.85	0.35	2
579	201931	H52446	0.15	2.46	1.18	1.24	4.12	5.65	0.85	1.63	2
580	289570	N82766	6.23	2.46	1.31	3.10	3.00	3.31	2.60	1.46	2
581	67069	T70438	0.62	2.46	7.98	3.28	1.04	0.86	0.82	0.71	2
582	25061	R38944	14.56	2.46	1.10	3.69	3.77	1.95	2.40	1.86	2
583	596501	AA151917	2.97	2.45	2.15	1.50	2.68	1.02	3.10	4.26	2
584	745206	AA626884	0.53	2.45	1.24	2.32	2.05	2.52	3.50	3.07	2
585	785890	AA449382	6.28	2.45	3.01	2.79	1.45	1.12	2.10	4.21	2
586	358046	WP4591	0.81	2.45	3.60	6.39	1.82	1.21	1.17	0.50	2
587	563880	AA101173	0.03	2.45	3.25	0.47	1.58	0.77	1.51	7.13	2
588	795407	AA453518	0.13	2.44	0.33	0.97	1.47	5.45	0.62	5.82	2
589	1480995	AA890098	5.95	2.44	2.08	2.15	1.42	2.58	3.31	3.12	2
590	753162	AA400457	2.39	2.44	3.25	3.62	0.79	1.92	2.27	2.80	2
591	712499	AA278382	2.63	2.44	1.50	3.82	2.40	3.47	1.58	1.88	2
592	489858	AA098389	0.04	2.44	4.08	1.37	2.01	1.00	0.24	5.92	2
593	110503	T89986	0.60	2.43	0.73	1.24	0.76	0.82	5.55	5.38	2
594	197465	H52048	0.35	2.43	1.53	2.49	3.94	0.91	4.24	1.47	2
595	429729	AA011685	1.61	2.42	2.40	4.68	1.51	3.19	1.84	0.93	2
596	731371	AA421047	0.03	2.42	0.99	3.84	2.29	2.95	0.33	4.12	2
597	782585	AA447527	0.48	2.42	3.45	1.49	5.47	1.78	1.44	0.80	2
598	811010	AA485385	0.06	2.42	1.99	2.41	3.45	1.97	0.58	4.13	2
599	743445	AA609385	3.21	2.42	2.19	3.40	1.76	1.31	2.53	3.33	2
600	307328	N93470	0.03	2.42	5.00	3.80	0.67	1.74	2.14	1.15	2
601	297439	W03587	24.42	2.42	2.70	4.38	0.98	4.78	1.41	0.25	2
602	245320	N53456	1.20	2.41	4.58	3.25	2.53	2.71	0.66	0.75	2
603	140057	R85983	0.75	2.41	1.19	2.77	2.50	3.00	1.88	3.13	2
604	433294	AA699707	1.60	2.41	1.23	3.14	1.87	1.24	4.08	2.93	2
605	812227	AA455369	4.47	2.41	3.67	5.67	2.04	1.25	0.84	0.88	2
606	1560877	AA975010	1.07	2.41	2.29	2.67	3.01	3.69	1.52	1.27	2
607	283379	N52767	0.04	2.41	4.36	4.19	2.02	0.77	0.87	2.25	2
608	85195	T71360	0.02	2.41	4.76	0.45	0.29	0.45	8.08	0.45	2
609	813310	AA455184	3.54	2.40	2.76	4.07	1.41	2.17	3.03	0.99	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

	IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples	
610	222157	H85345	20.24	49.65	2.40	1.65	2.06	3.15	5.03	1.84	0.69	2
611	489098	AA056534	0.42	1.02	2.40	2.31	3.10	1.81	1.66	4.37	1.35	2
612	1456776	AA863314	1.81	4.35	2.40	2.09	0.93	1.72	2.47	3.18	4.01	2
613	1565549	AA976714	5.57	13.37	2.40	2.02	2.16	2.06	3.84	3.19	1.14	2
614	197787	R93727	1.09	2.61	2.40	4.02	3.00	1.99	2.54	1.47	1.39	2
615	731272	AA420983	3.88	9.29	2.40	5.00	3.67	1.60	1.07	1.12	1.93	2
616	501431	AA115300	1.00	2.39	2.39	3.92	3.62	1.47	1.73	1.61	2.01	2
617	415583	W84316	0.76	1.81	2.39	1.52	1.61	3.50	2.18	4.08	1.48	2
618	398380	AA732832	0.10	0.24	2.39	3.36	2.17	1.55	5.29	0.90	1.06	2
619	767991	AA418828	6.24	14.88	2.39	3.46	6.52	1.04	1.41	1.37	0.52	2
620	42325	R81798	18.89	44.60	2.39	5.17	3.13	2.86	0.88	0.70	1.47	2
621	428411	AA005386	1.75	4.16	2.38	1.69	3.32	2.18	3.03	2.42	1.68	2
622	272576	N35907	11.37	27.10	2.38	2.51	4.51	3.58	2.49	0.50	0.73	2
623	127063	R07891	1.23	2.93	2.38	3.82	3.35	1.85	1.41	2.81	1.24	2
624	796368	AA456135	12.87	30.59	2.38	1.77	3.33	2.54	4.28	1.43	0.91	2
625	795827	AA461508	0.03	0.07	2.37	0.67	4.90	0.75	5.01	1.77	1.15	2
626	1602284	AA988920	1.50	3.56	2.37	2.49	3.07	2.31	3.14	1.72	1.48	2
627	487959	AA054585	0.20	0.47	2.37	1.64	2.34	3.45	3.39	0.66	2.73	2
628	1480391	AA883812	0.78	1.84	2.37	1.84	3.09	1.87	3.81	2.50	1.09	2
629	22700	R43566	1.08	2.56	2.37	1.06	1.93	3.22	1.78	4.47	1.74	2
630	432581	AA699390	7.05	16.64	2.36	4.09	4.25	2.31	1.16	1.43	0.93	2
631	757222	AA496149	2.81	6.63	2.36	1.94	3.55	0.84	0.90	1.70	5.24	2
632	244896	N54512	0.28	0.67	2.36	1.88	3.50	3.02	1.59	1.37	2.79	2
633	413300	AA772497	0.36	0.84	2.36	1.84	3.27	2.31	2.33	1.24	3.15	2
634	285443	N66393	1.60	3.77	2.36	1.65	5.16	1.06	1.43	3.15	1.69	2
635	825857	AA504783	1.54	3.61	2.35	4.14	3.65	1.91	2.15	0.83	1.43	2
636	264938	N21237	4.33	10.16	2.35	1.58	4.36	1.89	4.01	1.75	0.50	2
637	43709	H05734	0.57	1.34	2.35	4.38	2.28	1.17	0.79	0.75	4.71	2
638	41720	R54105	0.09	0.21	2.35	2.89	0.26	3.80	0.62	4.07	2.43	2
639	298679	W05628	0.81	1.89	2.34	2.08	3.24	1.37	1.91	4.73	0.72	2
640	731180	AA417246	0.64	1.51	2.34	2.08	1.24	2.39	1.15	3.46	3.75	2
641	810284	AA463932	0.60	1.40	2.34	1.52	1.71	1.79	3.21	3.01	2.78	2
642	898055	AA598856	0.05	0.12	2.34	3.49	2.31	2.89	3.16	0.12	2.05	2
643	1240220	AA768970	4.63	10.81	2.33	3.43	7.25	0.74	0.71	0.91	0.97	2

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

	IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumor Samples	
644	242037	H93328	0.38	0.89	2.33	3.07	2.13	0.85	1.86	4.32	1.76	2
645	470914	AA032084	13.04	30.41	2.33	2.36	3.53	1.24	2.33	3.03	1.50	2
646	38280	R49482	0.70	1.64	2.33	1.90	0.47	0.87	0.59	5.53	4.59	2
647	50250	H17800	0.81	1.89	2.32	3.30	3.08	2.73	2.02	1.50	1.32	2
648	743217	AA400128	1.85	4.30	2.32	1.78	3.31	2.05	2.70	3.18	0.82	2
649	290841	N71982	4.59	10.65	2.32	3.15	3.16	0.87	2.32	1.70	2.71	2
650	814595	AA480908	5.94	13.75	2.32	1.14	2.10	1.47	3.01	4.67	1.50	2
651	240768	H80215	2.74	6.35	2.32	1.73	3.33	3.46	2.02	1.79	1.58	2
652	34889	R44447	2.35	5.45	2.31	1.25	1.34	1.59	3.79	2.55	3.37	2
653	51283	H18838	0.06	0.14	2.31	4.10	1.12	1.78	1.85	1.37	3.63	2
654	810209	AA464522	1.10	2.54	2.30	1.35	0.96	5.47	1.37	3.40	1.28	2
655	795831	AA461508	0.07	0.17	2.30	1.39	2.39	3.59	5.16	0.46	0.83	2
656	745138	AA626698	12.78	29.36	2.30	3.25	2.34	3.04	2.67	1.74	0.77	2
657	488078	AA057195	0.02	0.05	2.30	1.88	3.30	2.10	5.47	0.55	0.48	2
658	344108	W73781	3.42	7.83	2.29	4.00	3.17	2.58	1.61	0.98	1.43	2
659	727192	AA293819	12.78	29.26	2.29	2.09	0.89	2.24	3.41	3.56	1.55	2
660	41541	R52789	4.22	9.64	2.29	2.19	3.57	3.59	1.28	1.49	1.60	2
661	795353	AA453487	4.31	9.86	2.29	1.68	4.15	1.50	4.56	0.88	0.94	2
662	40400	R52088	0.31	0.71	2.28	2.41	0.86	1.19	0.31	4.68	4.28	2
663	48330	H14949	0.17	0.38	2.28	1.85	3.18	2.62	2.50	3.07	0.48	2
664	769800	AA425900	0.09	0.20	2.28	3.18	0.12	2.08	2.75	5.09	0.47	2
665	112865	T87139	2.61	5.95	2.28	1.59	3.50	3.29	1.78	1.99	1.51	2
666	362795	AA018683	0.06	0.13	2.28	2.04	6.08	0.18	3.14	0.18	2.05	2
667	384397	AA708676	0.46	1.05	2.27	1.47	3.59	1.54	1.96	3.17	1.91	2
668	26568	R39111	0.74	1.68	2.27	3.15	0.55	0.70	2.64	1.53	5.05	2
669	199228	R85811	0.58	1.27	2.27	1.69	3.64	3.07	1.93	1.63	1.65	2
670	41070	R56100	0.03	0.07	2.27	1.48	2.18	0.33	1.19	4.15	4.27	2
671	51103	H19217	0.37	0.83	2.27	0.74	4.79	1.44	1.55	3.13	1.94	2
672	346552	W74377	0.02	0.04	2.27	3.52	2.57	3.03	2.05	0.61	1.81	2
673	624785	AA181985	4.34	9.82	2.26	3.02	3.29	1.52	2.48	1.77	1.51	2
674	626716	AA191548	17.62	39.85	2.26	3.68	3.59	0.94	2.27	1.42	1.67	2
675	785760	AA449688	0.02	0.04	2.26	3.56	3.49	2.71	2.58	0.71	0.53	2
676	345145	W72231	3.57	8.07	2.26	3.73	3.52	2.16	1.92	0.60	1.62	2
677	46820	H10036	15.87	35.82	2.26	0.96	1.62	1.52	1.49	3.82	4.13	2

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

	IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
676	811832	AA463627	0.05	0.11	2.25	0.87	0.21	2.33	0.21	5.03	4.87	2
679	49141	H16554	0.19	0.44	2.25	1.32	2.11	3.19	1.73	1.38	3.78	2
680	823691	AA489752	2.53	5.67	2.24	3.20	3.06	1.94	1.36	1.62	2.28	2
681	754127	AA476827	3.54	7.92	2.23	2.21	5.87	0.86	3.94	0.37	0.36	2
682	1461609	AA883800	0.50	1.11	2.23	1.70	1.34	0.96	3.17	4.44	1.75	2
683	45098	H05140	0.32	0.70	2.22	1.86	4.17	1.42	3.53	0.72	1.63	2
684	232912	H72643	21.80	48.25	2.21	3.16	3.03	1.94	1.77	1.67	1.72	2
685	135789	R33353	0.11	0.25	2.21	1.97	3.06	2.59	3.48	0.79	1.35	2
686	785308	AA454149	0.10	0.23	2.21	3.92	3.22	1.18	2.96	1.72	0.26	2
687	449270	AA777696	0.06	0.13	2.21	2.46	1.00	3.23	2.25	1.21	3.10	2
688	898195	AA598587	1.71	3.77	2.20	1.85	3.01	0.59	2.16	2.77	3.05	2
689	131073	R23241	4.56	10.05	2.20	1.61	1.24	1.02	5.17	0.91	3.28	2
690	233277	H77494	0.98	2.16	2.20	1.77	3.15	3.31	2.10	1.98	0.80	2
691	243800	N39338	1.49	3.27	2.20	2.38	1.42	1.49	3.06	1.59	3.27	2
692	782541	AA448486	0.13	0.29	2.20	1.26	3.11	6.76	0.80	0.20	1.07	2
693	813641	AA447744	0.48	1.06	2.20	1.94	2.03	1.19	1.36	3.30	3.35	2
694	128568	R06862	3.87	8.47	2.19	2.26	3.85	3.24	1.57	1.12	1.09	2
695	345553	W73889	0.05	0.11	2.19	1.87	1.73	3.63	0.20	0.20	5.50	2
696	51947	H24313	2.05	4.49	2.19	1.10	1.74	2.61	3.42	3.28	0.98	2
697	40010	R54036	0.09	0.21	2.19	0.84	0.11	3.51	0.13	1.93	6.60	2
698	383188	AA074224	0.29	0.64	2.18	1.56	3.14	2.20	0.53	4.87	0.81	2
699	73531	T55639	0.05	0.11	2.18	3.98	1.50	0.27	3.22	1.35	2.78	2
700	768020	AA418748	3.05	6.63	2.18	0.48	0.82	6.02	3.04	0.78	1.93	2
701	33880	R44840	6.15	13.38	2.18	2.11	3.23	3.65	1.29	1.24	1.53	2
702	46166	H08076	3.52	7.66	2.17	4.03	4.62	2.45	1.01	0.17	0.77	2
703	283191	N51362	2.72	5.90	2.17	3.17	3.06	0.65	2.60	0.77	2.79	2
704	647885	AA207105	11.41	24.76	2.17	1.43	3.18	0.73	2.88	3.94	1.08	2
705	491001	AA136710	5.71	12.38	2.17	1.28	0.93	1.27	1.26	4.03	4.23	2
706	1461161	AA688038	1.08	2.34	2.16	1.67	1.35	3.92	3.45	1.19	1.39	2
707	757503	AA426380	1.95	4.21	2.16	1.68	4.53	1.35	3.60	1.13	0.88	2
708	280375	N47113	1.16	2.51	2.16	4.65	3.70	1.70	0.96	0.72	1.23	2
709	363916	AA021247	1.43	3.09	2.16	1.68	3.74	1.81	3.80	0.88	0.92	2
710	121729	T98001	0.73	1.58	2.15	1.34	3.07	1.77	1.30	2.36	3.09	2
711	685801	AA262080	1.29	2.77	2.15	1.58	0.79	0.98	5.28	1.08	3.20	2

**Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.**

IMAGE	Gen Bank	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM124/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumor Samples	
Clone ID	Accession Number											
712	207370	H58834	0.13	0.27	2.15	1.14	1.36	1.33	3.92	1.95	3.18	2
713	202785	H53984	2.15	4.60	2.14	1.36	3.31	3.06	2.27	1.88	0.96	2
714	826138	AA521337	0.01	0.02	2.14	4.28	0.94	4.27	1.46	0.94	0.94	2
715	322461	W15305	2.11	4.50	2.13	3.57	3.32	2.76	0.71	1.30	1.13	2
716	188232	H45711	0.61	1.31	2.13	3.34	1.13	1.34	1.68	1.16	4.14	2
717	197525	H52001	2.60	5.54	2.13	2.40	3.78	3.35	2.45	0.34	0.47	2
718	460279	AA677629	0.68	1.44	2.13	2.50	3.41	1.76	3.41	1.02	0.89	2
719	245444	N53492	0.53	1.12	2.13	1.10	2.23	1.40	3.97	3.07	1.03	2
720	83028	T67807	1.42	3.02	2.13	0.99	3.50	3.33	2.50	0.59	1.88	2
721	276871	N39426	0.05	0.11	2.13	6.86	0.19	1.08	0.19	1.11	3.34	2
722	417059	W87801	0.12	0.25	2.13	0.40	4.34	0.31	5.94	1.68	0.08	2
723	294255	N89839	13.11	27.87	2.13	1.47	3.12	3.23	1.23	1.67	2.04	2
724	243700	N45083	1.34	2.84	2.13	1.35	3.02	1.62	1.40	4.42	0.94	2
725	285040	N63375	5.95	12.63	2.12	3.18	3.00	0.85	1.28	1.60	2.84	2
726	73252	T56013	1.33	2.82	2.12	1.70	3.05	1.47	4.55	0.92	1.02	2
727	743465	AA609385	1.79	3.78	2.11	0.80	1.15	3.08	0.92	0.92	5.71	2
728	164465	R54850	4.31	9.09	2.11	3.15	3.51	2.17	1.16	1.40	1.27	2
729	814780	AA455227	0.13	0.27	2.10	3.09	0.96	3.49	2.09	0.98	2.01	2
730	322005	W37418	0.91	1.90	2.10	1.29	1.12	3.41	1.85	1.43	3.49	2
731	416945	W67710	3.08	6.46	2.10	1.64	3.31	3.19	1.59	1.17	1.68	2
732	624429	AA182680	6.29	13.17	2.10	1.20	3.14	1.32	2.68	3.20	1.03	2
733	1031844	AA609688	0.08	0.16	2.09	0.17	1.06	0.74	4.67	1.56	4.35	2
734	345176	W72263	0.18	0.37	2.09	1.24	1.24	1.45	4.29	4.03	0.28	2
735	678652	AA670200	1.48	3.08	2.09	1.94	3.20	1.64	3.65	0.99	1.11	2
736	368511	AA026609	4.79	9.99	2.09	1.37	3.02	3.06	1.55	1.49	2.04	2
737	235173	H73013	1.44	2.99	2.08	1.48	3.27	3.55	0.87	1.39	1.95	2
738	298448	N74623	0.06	0.13	2.08	2.84	0.16	0.56	3.12	4.93	0.84	2
739	357264	W93585	1.11	2.28	2.08	2.07	3.92	0.92	3.60	1.38	0.44	2
740	39799	R52640	0.33	0.67	2.05	1.08	3.65	1.82	0.25	0.28	5.19	2
741	462957	AA682425	1.20	2.45	2.04	0.92	3.31	1.69	1.59	3.62	1.14	2
742	292770	N63846	0.07	0.15	2.04	4.41	2.53	0.14	0.63	1.16	3.40	2
743	195635	R89317	0.26	0.53	2.04	3.70	3.56	1.95	1.90	0.32	0.80	2
744	563673	AA101299	0.58	1.19	2.03	2.13	3.21	3.13	2.80	0.64	0.50	2
745	785522	AA454218	0.05	0.10	2.03	0.66	0.20	0.98	3.23	5.47	1.68	2



Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
746	42035	0.19	0.39	2.03	1.37	1.12	3.98	1.13	3.33	1.27	2
747	280412	0.02	0.05	2.03	4.97	1.05	0.57	0.84	0.40	4.35	2
748	700302	0.04	0.09	2.03	1.01	0.21	3.77	1.83	1.37	3.99	2
749	40082	0.33	0.66	2.02	3.25	0.81	1.78	0.58	1.83	3.88	2
750	1486109	112.27	226.02	2.01	1.69	3.11	1.86	3.12	1.33	0.97	2
751	415906	0.27	0.55	2.01	1.00	3.06	1.36	1.47	2.10	3.08	2
752	390421	2.08	4.18	2.01	0.73	0.73	1.08	3.17	3.58	2.77	2
753	744982	10.80	21.69	2.01	1.77	1.69	3.05	3.01	1.55	0.99	2
754	415111	0.85	1.30	2.01	1.54	3.53	3.51	1.34	1.36	0.77	2
755	811046	0.08	0.16	2.01	1.48	0.12	1.12	4.05	0.90	4.37	2
756	590840	0.14	0.27	2.01	0.92	3.88	0.93	0.61	2.31	3.41	2
757	588053	2.74	5.47	1.99	0.61	0.28	1.31	4.80	4.27	0.70	2
758	278496	2.33	4.63	1.99	1.28	3.38	1.63	3.00	1.74	0.87	2
759	32962	0.33	0.65	1.98	0.56	4.06	1.99	0.92	3.70	0.87	2
760	878785	13.20	26.15	1.98	1.66	3.55	1.14	3.73	1.31	0.49	2
761	627105	9.88	19.43	1.97	1.41	3.00	1.85	3.99	1.07	0.49	2
762	42123	1.76	3.45	1.96	2.41	3.44	0.45	3.67	1.34	0.42	2
763	245547	2.57	5.02	1.95	3.53	4.14	1.49	0.91	0.44	1.22	2
764	752704	0.13	0.25	1.95	1.25	3.84	1.08	1.57	0.60	3.40	2
765	48921	3.50	6.82	1.95	0.96	3.61	1.32	3.38	1.26	1.16	2
766	1031309	0.51	0.99	1.95	3.04	3.06	0.98	1.89	1.68	1.04	2
767	376043	0.07	0.13	1.94	0.15	3.60	2.65	0.63	0.15	4.47	2
768	51373	0.13	0.26	1.94	2.30	1.24	3.70	3.77	0.56	0.07	2
769	361363	5.53	10.65	1.93	1.54	0.87	1.45	1.35	3.22	3.15	2
770	451121	0.59	1.13	1.92	0.78	1.30	1.49	1.78	3.10	3.11	2
771	769833	0.52	0.99	1.92	1.31	1.88	0.78	0.75	3.17	3.68	2
772	782826	0.06	0.12	1.92	0.80	0.16	1.67	0.16	3.99	4.76	2
773	841281	1.52	2.93	1.92	4.92	0.83	0.83	0.98	0.89	3.01	2
774	610883	2.84	5.46	1.92	1.96	3.63	1.18	3.76	0.32	0.68	2
775	813730	2.20	4.23	1.92	3.26	3.09	0.82	0.89	1.23	2.43	2
776	810996	0.03	0.05	1.92	0.60	0.39	4.59	5.15	0.39	0.39	2
777	841688	5.91	11.33	1.92	1.22	0.65	1.41	3.58	0.92	3.71	2
778	277112	0.73	1.38	1.91	2.14	3.20	1.12	3.17	0.78	1.04	2
779	530608	0.05	0.10	1.80	0.18	0.16	0.54	1.35	3.59	5.59	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
780	208570	0.59	1.10	1.89	0.51	0.48	2.48	3.11	3.59	1.14	2
781	131887	2.12	3.98	1.88	3.19	1.11	1.57	0.87	1.04	3.49	2
782	341878	1.28	2.41	1.88	3.07	3.06	1.81	1.31	0.70	1.31	2
783	481727	1.49	2.80	1.88	3.10	0.77	2.34	3.24	0.89	0.92	2
784	815550	3.03	5.67	1.87	0.83	0.89	1.54	0.50	4.16	3.30	2
785	33989	7.22	13.49	1.87	0.98	3.01	1.39	4.56	0.80	0.48	2
786	34041	0.12	0.23	1.87	0.95	3.90	1.51	1.20	0.08	3.55	2
787	743189	0.04	0.08	1.86	2.05	3.30	1.81	3.55	0.24	0.23	2
788	247194	0.36	0.66	1.86	1.09	3.23	1.26	3.14	1.38	1.08	2
789	183771	1.91	3.56	1.86	1.23	3.04	1.22	3.07	1.82	0.79	2
790	491764	0.08	0.14	1.86	3.80	3.09	1.20	1.47	1.48	0.13	2
791	782594	0.02	0.04	1.85	3.26	3.78	2.14	1.09	0.42	0.42	2
792	471859	0.03	0.05	1.85	3.10	5.05	0.57	0.47	1.55	0.39	2
793	276712	0.13	0.23	1.85	0.30	0.39	5.27	1.75	0.10	3.28	2
794	44154	1.53	2.83	1.85	2.02	3.26	0.78	3.22	1.20	0.59	2
795	261274	2.71	5.00	1.84	1.16	3.49	1.61	3.99	0.39	0.42	2
796	839081	11.79	21.75	1.84	3.03	3.73	0.71	2.01	0.60	0.98	2
797	502625	0.88	1.61	1.84	4.66	0.80	0.64	0.88	0.19	4.08	2
798	77577	0.29	0.52	1.83	1.41	3.32	1.19	3.24	1.13	0.88	2
799	839829	0.23	0.41	1.82	1.28	3.14	1.17	1.84	3.17	0.53	2
800	83091	0.11	0.20	1.82	1.57	0.53	0.62	0.77	4.18	3.24	2
801	358531	2.78	5.05	1.82	3.97	0.53	1.15	0.95	0.89	3.60	2
802	32339	0.14	0.24	1.80	0.81	0.47	3.98	3.10	0.42	2.00	2
803	417888	0.20	0.35	1.80	1.48	0.57	0.05	1.03	3.31	4.34	2
804	1435339	0.04	0.07	1.79	0.22	3.54	0.73	1.30	0.25	4.72	2
805	128973	0.05	0.09	1.75	0.93	4.27	3.36	1.30	0.20	0.43	2
806	361323	2.04	3.57	1.75	0.84	1.00	3.73	3.19	0.89	0.86	2
807	568440	0.05	0.09	1.75	0.31	0.77	1.71	3.44	0.20	4.04	2
808	857198	0.46	0.79	1.74	1.59	3.02	0.94	0.48	0.90	3.53	2
809	568958	0.03	0.06	1.71	6.02	0.31	3.02	0.31	0.31	0.31	2
810	741881	5.81	9.84	1.69	1.65	0.69	0.62	0.74	3.11	3.35	2
811	810027	0.04	0.07	1.69	4.25	0.80	0.94	3.45	0.57	0.18	2
812	811609	0.03	0.05	1.65	5.05	0.33	0.21	3.08	0.21	1.05	2
813	361807	0.21	0.35	1.63	0.45	3.01	1.77	0.79	0.33	3.44	2

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM124/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumor Samples
814	795538	AA459851	0.10	1.60	0.95	0.10	0.51	3.09	3.13	1.83	2
815	280168	N32071	0.02	1.59	0.51	0.66	0.38	3.52	0.68	3.79	2
816	809935	AA189154	0.02	1.59	0.28	4.10	0.43	3.84	0.43	0.43	2
817	47187	H10404	0.06	1.57	0.21	3.55	3.54	0.45	0.16	1.52	2
818	810948	AA459383	0.05	1.57	1.00	3.48	3.31	0.64	0.18	0.81	2
819	490558	AA100696	0.04	1.56	3.03	0.23	1.13	1.63	3.05	0.27	2
820	789579	AA425826	0.11	1.53	4.53	0.39	3.52	0.20	0.18	0.34	2
821	454083	AA676988	0.05	1.47	3.29	3.40	0.22	1.51	0.22	0.22	2
822	52071	H24350	0.27	1.47	3.02	3.31	0.69	0.81	0.31	0.67	2
823	511066	AA100286	0.03	1.35	0.33	0.48	3.30	3.34	0.33	0.33	2
824	742618	AA400482	0.24	1.33	3.06	0.05	1.14	0.23	0.40	3.07	2
825	504464	AA152178	0.06	32.02	186.97	2.01	0.17	2.61	0.17	0.17	1
826	306420	N92689	0.07	26.82	2.37	0.45	0.14	0.14	155.49	2.32	1
827	452374	AA700876	3.59	22.47	0.60	1.38	132.15	0.22	0.14	0.32	1
828	384015	AA702640	0.32	16.48	2.18	2.14	2.48	0.75	91.20	0.14	1
829	48841	H10344	0.07	8.77	0.83	0.14	0.29	2.14	48.98	2.25	1
830	158322	R72618	0.08	7.60	1.37	0.78	1.76	0.14	40.15	1.39	1
831	81413	T60161	0.15	6.43	0.62	0.93	1.48	1.54	0.58	33.43	1
832	745232	AA628152	0.33	6.03	2.98	2.15	24.89	1.04	2.90	2.23	1
833	429210	AA007276	0.27	5.77	0.90	0.45	0.30	1.35	0.25	31.39	1
834	50354	H17804	0.28	5.61	0.07	1.18	0.70	30.40	0.69	0.65	1
835	364563	AA022649	0.30	5.42	0.52	0.89	0.13	1.21	1.70	27.99	1
836	488422	AA044662	0.05	5.40	1.15	0.89	0.63	1.19	1.10	27.41	1
837	50799	H17630	0.30	5.36	0.82	1.21	2.14	1.43	1.89	24.70	1
838	302180	N79989	0.22	5.35	2.39	0.79	1.61	1.51	24.08	1.74	1
839	128083	R09747	0.04	5.12	1.88	1.08	26.16	0.26	1.06	0.26	1
840	25933	R36969	0.07	4.96	0.96	0.82	26.26	1.46	0.14	0.14	1
841	229866	H88542	0.11	4.77	2.48	0.09	25.48	0.07	0.08	0.43	1
842	744827	AA821310	0.82	4.71	0.95	1.14	22.95	1.24	1.38	0.82	1
843	884482	AA629707	0.15	4.42	0.13	1.05	0.32	2.09	22.55	0.40	1
844	361291	AA017488	1.00	4.41	0.57	1.15	1.35	20.54	0.78	2.06	1
845	301735	N90882	0.11	4.33	19.43	2.89	1.98	0.42	1.17	0.09	1
846	753076	AA436479	2.41	4.30	0.47	0.65	23.85	0.22	0.21	0.41	1
847	510381	AA055585	0.32	4.23	19.31	0.51	1.32	1.01	0.69	2.52	1

Table 2-1.T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumor Samples	
848	448401	AA777538	1.91	4.21	0.91	1.74	18.40	0.98	2.09	1.12	1
849	504940	AA150819	0.70	4.16	1.19	1.74	0.82	1.23	19.01	0.95	1
850	122298	T89158	1.71	4.08	1.32	2.06	1.16	1.28	2.94	15.68	1
851	781442	AA428603	1.56	4.03	1.32	1.09	0.51	0.36	20.03	0.86	1
852	430004	AA034014	0.92	3.97	1.74	1.54	0.57	0.04	17.96	1.99	1
853	23421	R38261	2.28	3.92	2.13	2.98	1.30	1.23	14.18	1.67	1
854	824211	AA490975	1.65	3.80	1.08	1.29	15.59	1.72	2.23	0.91	1
855	43085	R61868	0.43	3.74	1.37	0.95	2.14	0.67	14.52	2.78	1
856	347183	W80666	1.65	3.58	0.59	0.93	1.22	1.92	1.22	15.62	1
857	32381	R43452	3.38	3.48	2.06	1.14	1.62	10.80	2.71	2.58	1
858	592778	AA158211	0.12	3.46	0.47	0.21	1.36	0.63	1.95	16.16	1
859	454908	AA877403	2.05	3.45	0.77	0.38	1.22	14.94	1.32	2.08	1
860	340641	W56760	0.91	3.41	1.52	1.27	1.69	15.08	0.51	0.39	1
861	897722	AA588983	0.26	3.40	16.70	0.81	0.76	0.95	1.03	0.13	1
862	868882	AA678352	0.64	3.36	17.69	1.01	0.80	0.60	0.21	0.05	1
863	130684	R22579	2.22	3.35	1.17	0.97	14.33	1.21	1.19	1.22	1
864	1608080	AA985508	1.59	3.34	1.80	1.58	1.72	1.32	11.93	1.68	1
865	788280	AA424950	2.69	3.28	1.66	12.82	2.38	0.89	1.08	0.83	1
866	46830	H10028	0.92	3.27	1.15	0.99	0.74	1.64	13.18	1.89	1
867	1035765	AA829117	33.26	3.25	0.55	0.26	1.17	15.74	1.49	0.32	1
868	591025	AA159068	0.67	3.24	1.63	0.50	2.32	1.36	2.40	11.24	1
869	194515	R86242	1.87	3.24	6.47	2.02	2.78	2.94	2.78	2.43	1
870	308412	N93790	0.05	3.21	1.60	0.62	1.66	0.62	12.88	1.87	1
871	767449	AA418000	8.93	3.20	1.31	1.70	0.76	2.24	10.28	2.91	1
872	809981	AA455197	0.28	3.19	0.83	0.72	0.87	0.94	0.35	15.41	1
873	322175	W37778	5.71	3.18	2.63	6.05	2.60	2.45	2.92	2.41	1
874	287770	N62251	0.31	3.14	1.79	0.93	12.98	2.84	0.10	0.23	1
875	51216	H18471	1.03	3.13	1.22	1.79	1.32	1.82	11.65	1.01	1
876	591683	AA147214	0.10	3.13	0.62	0.57	11.65	2.53	1.55	1.85	1
877	51951	H24317	1.01	3.10	1.50	12.98	1.31	1.06	0.77	1.00	1
878	429175	AA004824	0.58	3.08	1.55	6.34	2.94	2.52	2.46	2.64	1
879	34449	R44164	1.41	3.05	0.95	11.69	0.77	1.45	1.05	2.37	1
880	280217	N47941	19.12	3.04	1.98	1.84	0.85	0.83	11.66	1.12	1
881	360838	AA017141	1.01	3.00	2.60	1.86	2.57	1.66	1.18	8.11	1

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

	IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples	
882	730946	AA416543	1.11	3.32	2.98	0.90	0.96	12.90	1.25	1.05	0.81	1
883	785287	AA454155	2.01	5.93	2.95	0.60	0.67	13.67	0.74	1.21	0.81	1
884	198237	R95773	0.39	1.13	2.91	2.12	2.71	1.68	7.41	1.89	1.65	1
885	462003	AA780027	0.60	1.73	2.91	1.15	2.19	2.85	1.88	7.67	1.73	1
886	703943	AA279145	3.01	8.74	2.90	2.81	2.95	1.84	5.15	2.56	2.12	1
887	781027	AA446031	0.63	1.82	2.90	1.39	1.34	1.32	1.43	1.66	10.28	1
888	625516	AA187595	0.02	0.06	2.89	0.52	1.94	0.52	2.66	2.19	9.52	1
889	838478	AA457517	4.06	11.68	2.88	1.28	0.45	1.22	10.05	1.44	2.83	1
890	46387	H09959	1.41	4.06	2.88	2.57	7.47	2.29	1.27	1.75	1.91	1
891	213753	H72322	0.26	0.73	2.87	1.57	2.40	2.53	1.74	7.18	1.79	1
892	128449	R06706	0.22	0.63	2.87	0.97	2.25	1.77	1.73	9.16	1.31	1
893	305243	N95007	0.60	1.70	2.86	1.99	2.55	2.98	1.18	2.07	6.39	1
894	254117	N22230	1.22	3.49	2.86	0.86	0.81	12.24	1.03	1.03	1.16	1
895	198285	R85893	0.14	0.41	2.85	2.05	2.36	1.80	2.15	7.24	1.48	1
896	51916	H22563	0.74	2.10	2.84	2.50	2.20	2.20	2.52	5.64	1.98	1
897	111370	T85173	1.89	5.34	2.83	1.63	1.87	1.92	1.04	2.87	7.65	1
898	376435	AA039713	1.18	3.34	2.83	1.76	2.11	0.92	7.08	2.69	2.39	1
899	24676	R38809	0.40	1.13	2.81	1.10	2.13	1.85	1.95	7.78	2.07	1
900	127931	R08938	0.66	1.85	2.79	1.21	0.97	10.42	1.72	1.24	1.21	1
901	77915	T61323	8.10	22.59	2.79	1.00	0.49	0.62	2.18	0.57	11.87	1
902	327481	W20438	0.76	2.12	2.78	2.05	2.09	2.59	5.89	2.57	1.69	1
903	40283	R55261	0.15	0.41	2.78	1.94	8.29	1.45	1.03	2.33	1.61	1
904	826109	AA521327	0.40	1.11	2.78	1.65	1.97	2.83	1.66	2.95	5.61	1
905	113180	T83842	0.66	1.83	2.77	1.55	1.53	9.91	1.30	1.08	1.26	1
906	268768	N62498	0.35	0.96	2.77	1.16	1.50	1.73	1.69	10.48	0.03	1
907	269936	N59336	0.57	1.58	2.76	1.73	2.11	1.80	8.37	1.28	1.29	1
908	770868	AA434487	0.09	0.26	2.75	12.49	0.46	0.72	1.13	0.69	1.02	1
909	197779	R93515	1.43	3.91	2.74	0.94	1.29	10.19	1.11	1.44	1.46	1
910	140831	R67218	0.94	2.57	2.73	1.07	1.33	9.71	1.37	1.26	1.62	1
911	51749	H24329	2.85	7.75	2.72	1.73	1.78	2.66	6.30	1.99	1.87	1
912	280977	N50864	1.00	2.71	2.71	1.62	1.49	1.30	10.18	0.79	0.90	1
913	41835	R54212	0.33	0.90	2.70	8.20	1.63	1.75	1.84	1.63	1.16	1
914	951125	AA620556	15.08	40.69	2.70	2.31	2.72	2.53	6.58	1.45	0.60	1
915	51011	H19242	4.02	10.78	2.68	1.31	1.50	2.02	7.45	2.53	1.28	1

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	Samples
916	44303	1.99	5.32	2.68	1.57	2.81	1.84	1.80	5.50	1
917	288838	0.61	1.63	2.68	1.80	6.53	2.29	1.39	1.88	1
918	139641	0.12	0.31	2.67	1.98	7.39	1.13	2.15	1.48	1
919	609228	0.09	0.25	2.67	0.51	2.46	0.83	1.38	0.33	1
920	743452	0.58	1.54	2.64	1.47	1.50	8.81	1.78	1.27	1
921	289708	0.33	0.87	2.63	2.06	6.78	1.41	2.87	1.48	1
922	505538	0.09	0.25	2.63	2.25	0.11	2.32	0.83	1.71	1
923	53022	0.89	2.34	2.62	2.59	1.25	1.32	6.01	1.69	1
924	273548	2.51	6.55	2.61	2.25	2.58	2.24	6.64	0.98	1
925	843048	0.10	0.25	2.60	2.59	1.11	8.50	1.27	0.72	1
926	594517	31.25	81.32	2.60	1.36	2.19	2.32	6.51	1.76	1
927	453175	0.99	2.58	2.60	5.15	2.24	1.63	2.78	1.77	1
928	360357	0.26	0.67	2.60	1.94	9.92	1.20	1.46	0.37	1
929	345525	3.95	10.21	2.58	2.40	2.96	1.23	5.65	1.74	1
930	344274	0.13	0.33	2.58	0.08	0.69	12.77	0.53	0.28	1
931	399152	0.03	0.08	2.58	9.39	0.82	1.72	2.27	0.98	1
932	767345	1.03	2.65	2.58	1.48	1.68	2.03	2.47	5.56	1
933	743727	0.86	2.22	2.58	0.98	2.46	5.63	1.51	1.91	1
934	810625	0.07	0.18	2.57	1.64	1.73	1.89	1.42	7.19	1
935	1476181	0.20	0.51	2.57	1.98	1.32	1.27	7.42	2.20	1
936	814154	0.87	2.23	2.57	1.20	1.20	1.67	8.80	0.59	1
937	34832	0.59	1.53	2.57	1.13	1.11	1.07	0.94	0.72	1
938	435820	0.50	1.29	2.56	2.29	1.57	2.64	1.01	0.54	1
939	130703	3.70	9.47	2.56	1.96	5.20	1.35	2.96	1.57	1
940	30428	3.15	8.00	2.54	1.75	2.23	0.74	2.28	2.59	1
941	299162	0.03	0.07	2.54	0.36	0.36	2.96	9.96	0.36	1
942	267679	0.58	1.47	2.53	2.42	5.39	1.41	2.09	1.48	1
943	145363	0.10	0.24	2.52	1.76	1.91	1.19	1.86	8.26	1
944	154720	0.05	0.13	2.52	2.29	7.29	1.91	0.19	1.86	1
945	395955	0.49	1.22	2.52	1.20	1.50	1.33	0.70	9.11	1
946	412949	0.92	2.31	2.51	1.63	5.07	2.31	1.74	1.69	1
947	120892	3.38	8.48	2.51	1.12	1.30	2.13	1.84	1.86	1
948	271989	0.18	0.45	2.50	1.45	2.91	1.52	1.12	5.41	1
949	592592	3.36	8.37	2.49	1.59	0.54	2.12	9.45	0.77	1

Table 2-1: T3NO vs. BPH: Genes upregulated 5-fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

	IMAGE	Gen Bank	AveBPH	AveTumor	Fold(AveTumor/ eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
	Clone ID	Accession Number										
950	591055	AA161097	0.08	0.20	2.49	7.00	1.24	2.42	1.57	1.07	1.62	1
951	267252	N24578	0.83	2.07	2.48	6.02	2.69	1.38	1.52	1.97	1.31	1
952	53393	R16245	1.11	2.75	2.48	1.34	1.22	0.91	1.08	1.21	9.12	1
953	327058	AA284287	0.16	0.39	2.47	9.38	1.43	0.13	1.53	1.88	0.48	1
954	294544	N69425	0.51	1.25	2.47	2.70	5.07	2.03	2.61	0.94	1.48	1
955	202804	H54020	28.65	70.79	2.47	2.13	1.92	1.40	5.51	1.98	1.82	1
956	112456	T90971	0.27	0.67	2.47	1.93	2.00	1.57	1.15	5.60	2.54	1
957	810779	AA481754	0.25	0.61	2.47	1.81	1.94	1.23	1.48	6.78	1.56	1
958	431933	AA678164	1.11	2.73	2.46	1.61	5.16	2.27	1.48	2.27	1.99	1
959	359653	AA010872	0.32	0.80	2.46	0.97	2.24	2.13	1.48	1.27	6.81	1
960	681865	AA258157	0.61	1.51	2.46	1.43	2.61	1.59	5.29	1.80	2.03	1
961	239189	H70942	0.91	2.25	2.46	0.90	0.75	10.09	1.06	0.89	1.07	1
962	66564	T67058	0.31	0.76	2.46	2.60	7.66	0.56	0.87	1.05	1.99	1
963	215000	H73241	3.61	8.84	2.45	2.77	1.25	0.82	1.18	2.92	5.77	1
964	810773	AA481751	0.97	2.12	2.44	1.12	1.19	8.67	1.17	1.26	1.22	1
965	282000	N51107	0.53	1.29	2.44	2.00	1.90	5.73	1.70	1.87	1.43	1
966	201301	R98573	2.54	6.16	2.42	1.35	2.68	2.96	5.20	1.37	0.96	1
967	773170	AA428514	0.17	0.40	2.42	1.55	1.08	1.04	0.90	9.27	0.68	1
968	897658	AA496798	5.26	12.74	2.42	2.58	6.50	0.47	1.05	1.75	2.16	1
969	111884	T64998	0.03	0.07	2.41	1.89	1.77	2.00	1.45	2.36	5.02	1
970	744897	AA625784	1.69	4.06	2.40	1.57	1.49	2.43	5.19	2.25	1.49	1
971	46411	H09184	3.30	7.91	2.40	1.72	1.78	2.67	5.14	1.19	1.88	1
972	796761	AA460729	0.59	1.42	2.40	1.08	1.51	5.80	2.12	2.35	1.52	1
973	1031273	AA608054	0.38	0.91	2.39	1.15	7.94	1.69	0.99	0.90	1.70	1
974	46129	H09529	0.07	0.16	2.39	0.81	1.22	1.96	0.82	6.90	2.65	1
975	220369	H68816	1.11	2.85	2.39	1.00	1.09	1.16	1.46	7.40	2.27	1
976	1262170	AA705819	1.48	3.50	2.39	1.36	1.60	8.89	1.05	0.54	0.88	1
977	356711	W84560	0.78	1.86	2.38	1.32	2.39	1.02	1.38	8.51	1.68	1
978	430864	AA678203	0.65	1.56	2.38	1.54	2.21	2.36	5.04	1.26	1.84	1
979	35575	R45984	2.28	5.43	2.38	1.71	0.91	2.32	2.25	1.78	5.28	1
980	84079	T71008	0.53	1.26	2.37	0.80	1.53	1.02	8.43	1.41	1.04	1
981	1386395	AA844141	0.30	0.72	2.37	0.89	0.90	0.69	0.41	10.29	1.05	1
982	197793	R93729	0.76	1.81	2.37	1.39	1.02	8.38	2.45	0.70	0.28	1
983	26736	R39891	7.65	18.11	2.37	0.64	1.43	1.12	6.66	2.63	1.71	1

Table 2-1: T3NO vs. BPH: Genes upregulated 5-fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(NPM125/AveBPH)	# of Tumor Samples
984	39898	0.60	1.41	2.36	1.26	0.96	1.27	8.99	1.09	0.62
985	276815	0.13	0.32	2.36	7.54	0.57	2.63	1.43	1.70	0.30
986	430007	0.48	1.14	2.35	6.87	2.92	0.89	0.84	0.87	1.75
987	121815	0.44	1.04	2.35	7.31	1.59	1.65	1.23	1.13	1.21
988	828303	0.54	1.28	2.35	1.29	1.46	1.13	1.43	7.48	1.30
989	34442	1.70	4.00	2.35	0.88	0.88	2.43	8.64	0.85	0.41
990	742542	0.20	0.48	2.34	1.71	2.12	1.52	1.14	5.44	2.13
991	327878	0.30	0.70	2.34	1.23	1.45	1.58	5.33	1.78	2.68
992	180656	0.07	0.17	2.34	0.52	0.74	0.97	1.18	1.22	9.40
993	265114	0.34	0.80	2.34	7.86	0.89	1.88	1.01	0.44	2.14
994	826842	1.69	3.95	2.34	1.72	1.97	2.52	0.59	0.96	6.26
995	291403	0.04	0.10	2.33	5.38	0.72	2.23	1.44	2.12	2.12
996	240318	0.43	1.00	2.33	1.83	2.67	1.84	5.64	1.01	1.19
997	252884	1.84	3.82	2.33	0.77	0.58	9.21	0.93	0.89	1.48
998	302190	0.18	0.41	2.33	1.08	1.73	2.18	1.05	6.70	1.23
999	130742	0.83	1.94	2.33	1.55	1.60	7.25	1.31	1.29	0.96
1000	884663	1.31	3.05	2.33	0.67	0.64	0.61	9.75	1.41	0.87
1001	427693	0.28	0.65	2.32	1.41	1.54	1.91	1.41	1.54	6.13
1002	261241	0.85	1.97	2.32	2.51	5.63	1.48	1.28	1.99	1.05
1003	431029	0.06	0.13	2.32	5.12	1.92	2.46	2.71	0.86	0.85
1004	361998	0.46	1.07	2.32	1.41	0.59	0.79	9.48	0.33	1.34
1005	829498	2.16	4.99	2.32	0.93	1.17	8.26	1.19	1.30	1.05
1006	32444	0.03	0.06	2.30	1.84	0.79	1.88	2.04	2.01	5.13
1007	428778	0.25	0.58	2.29	0.96	0.54	0.17	2.08	9.31	0.70
1008	1030738	0.54	1.23	2.29	1.63	1.43	7.27	1.22	1.36	0.83
1009	773500	18.96	43.36	2.29	0.95	1.38	1.79	6.04	2.82	0.65
1010	305809	0.92	2.10	2.28	0.83	1.72	1.21	5.27	2.14	2.50
1011	30502	0.11	0.28	2.28	5.01	2.64	2.00	1.62	1.22	1.18
1012	897781	0.68	1.55	2.27	0.80	0.89	1.88	1.85	6.37	1.85
1013	430052	0.40	0.92	2.27	0.70	1.27	1.75	2.28	5.09	2.57
1014	46238	0.17	0.38	2.27	5.57	1.44	2.71	1.32	0.42	2.18
1015	703739	8.47	19.24	2.27	0.85	0.71	0.71	1.69	0.62	9.05
1016	342720	0.42	0.96	2.27	0.42	0.02	0.87	1.58	9.54	1.19
1017	25156	1.15	2.61	2.27	1.08	5.81	2.33	2.50	0.73	1.15



Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/ eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples	
1018	754654	AA411607	0.08	0.18	2.26	1.64	2.38	0.81	1.73	0.47	6.54	1
1019	377671	AA055979	0.08	0.17	2.25	2.09	0.54	1.89	0.13	6.30	2.58	1
1020	271789	N31805	2.29	5.18	2.25	0.33	0.35	0.39	11.15	1.12	0.17	1
1021	448885	AA777670	5.05	11.36	2.25	0.83	1.65	0.93	6.21	2.11	1.75	1
1022	171936	H19068	0.37	0.84	2.24	1.38	0.94	2.83	5.99	1.42	0.89	1
1023	376709	AA778089	1.21	2.70	2.23	0.48	1.43	0.94	1.26	8.84	0.44	1
1024	325012	AA284283	0.09	0.21	2.23	0.18	1.29	6.10	2.82	1.52	1.65	1
1025	363058	AA019316	0.22	0.48	2.22	7.67	0.92	1.02	1.27	1.25	1.20	1
1026	46914	H10208	0.78	1.73	2.22	6.51	1.41	1.00	1.35	1.81	1.21	1
1027	23819	R39446	0.38	0.85	2.21	0.63	1.56	1.02	8.04	1.07	2.97	1
1028	772660	AA476257	0.54	1.18	2.21	1.60	2.11	5.18	1.73	1.36	1.27	1
1029	71730	T51229	0.09	0.20	2.21	0.08	0.07	0.70	1.05	10.80	0.55	1
1030	261571	H98756	0.03	0.07	2.20	1.59	5.46	0.58	1.80	1.64	2.16	1
1031	814053	AA465495	10.76	23.71	2.20	0.66	0.35	2.52	9.15	0.27	0.27	1
1032	1292887	AA776755	0.48	1.05	2.20	1.24	1.46	1.02	0.71	7.63	1.13	1
1033	324660	AA284278	0.25	0.54	2.20	1.76	1.64	5.61	1.60	0.98	1.59	1
1034	72000	T52320	4.01	8.81	2.20	0.86	1.78	1.92	5.87	1.47	1.30	1
1035	1467109	AA883170	0.57	1.26	2.19	1.91	2.16	1.40	0.97	1.53	5.21	1
1036	244951	N54551	0.25	0.55	2.19	0.59	1.13	1.73	0.09	0.04	9.58	1
1037	593280	AA185512	1.86	4.07	2.19	0.77	0.65	9.52	0.83	0.76	0.62	1
1038	286040	N73584	1.50	3.29	2.19	1.03	1.66	1.99	1.69	1.34	5.45	1
1039	451871	AA706935	0.16	0.35	2.18	0.69	0.71	0.61	0.50	0.22	10.37	1
1040	795588	AA459692	0.78	1.70	2.18	1.13	1.28	6.35	1.41	1.27	1.87	1
1041	166189	R88246	0.05	0.11	2.18	1.50	0.53	2.15	6.01	1.14	1.76	1
1042	46183	H09616	0.08	0.18	2.18	1.76	0.47	8.54	0.12	0.12	2.07	1
1043	344806	W72838	0.42	0.91	2.18	1.28	1.47	1.24	1.70	1.05	6.35	1
1044	51939	H22956	0.42	0.91	2.18	8.97	0.79	0.96	1.07	0.55	0.73	1
1045	280682	N50806	0.05	0.11	2.17	10.72	0.90	0.18	0.19	0.86	0.19	1
1046	1461070	AA890147	0.51	1.09	2.17	1.57	1.72	1.25	0.82	6.45	1.19	1
1047	430235	AA010223	0.04	0.09	2.17	2.12	2.37	0.25	0.25	0.25	7.77	1
1048	212398	H68312	0.70	1.52	2.16	1.47	1.12	1.37	1.17	5.78	2.04	1
1049	147634	R81831	1.73	3.73	2.16	2.42	1.28	0.74	0.85	5.42	2.24	1
1050	416155	W66075	0.23	0.49	2.16	0.42	0.39	1.55	0.49	0.57	9.51	1
1051	139837	R62289	0.64	1.37	2.15	1.94	7.04	1.24	0.68	0.70	1.32	1

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/ AveBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	Samples
1052	131626	0.10	0.22	2.15	0.63	1.32	1.95	1.79	6.30	0.92	1
1053	32683	0.50	1.07	2.15	0.99	1.42	1.26	7.30	1.06	0.88	1
1054	1031717	1.03	2.22	2.15	1.83	1.79	1.80	5.23	1.14	1.10	1
1055	254328	1.39	2.97	2.15	0.66	0.43	9.65	0.73	0.79	0.60	1
1056	788805	0.66	1.42	2.14	1.48	2.24	2.10	5.53	0.52	1.00	1
1057	168245	0.03	0.07	2.14	0.31	5.65	0.31	2.51	1.42	2.64	1
1058	32991	0.26	0.55	2.14	10.49	0.04	1.10	0.61	0.20	0.38	1
1059	712840	0.13	0.28	2.13	1.31	0.35	1.44	0.49	8.11	1.08	1
1060	359153	0.47	1.00	2.13	1.35	1.22	6.15	1.77	1.37	0.92	1
1061	207864	0.42	0.89	2.13	1.08	1.48	2.05	1.23	1.34	5.57	1
1062	395711	0.10	0.22	2.12	1.66	5.61	1.05	1.66	1.38	1.40	1
1063	78946	3.51	7.43	2.12	1.23	0.53	1.70	1.68	1.15	6.41	1
1064	42373	2.61	5.52	2.11	2.11	0.91	1.90	1.25	1.33	5.19	1
1065	199828	0.18	0.37	2.10	1.07	1.40	0.88	1.69	0.70	6.89	1
1066	29828	1.30	2.72	2.10	2.03	0.72	0.48	2.13	1.94	5.32	1
1067	808828	0.66	1.39	2.10	6.79	1.73	0.53	1.28	0.89	1.30	1
1068	290561	2.80	5.88	2.10	1.31	1.57	0.58	1.09	0.95	7.10	1
1069	781088	0.62	1.31	2.10	1.23	0.99	6.61	1.56	1.28	0.92	1
1070	282384	0.51	1.06	2.09	1.05	0.99	1.90	1.23	1.17	6.21	1
1071	782673	0.21	0.44	2.08	0.47	1.67	0.47	1.20	7.98	0.69	1
1072	73785	1.35	2.78	2.07	1.21	1.21	1.49	5.44	1.88	1.22	1
1073	730124	0.22	0.44	2.05	2.93	1.29	0.05	2.06	5.24	0.73	1
1074	51493	0.28	0.57	2.05	1.36	0.99	0.32	1.09	7.73	0.79	1
1075	38497	0.34	0.70	2.05	0.64	1.05	0.28	0.36	9.67	0.30	1
1076	1048723	0.71	1.44	2.03	1.67	1.45	1.16	1.05	6.22	0.63	1
1077	141815	8.27	16.77	2.03	0.45	0.67	0.71	0.58	8.86	0.91	1
1078	757337	1.28	2.60	2.03	0.60	0.98	0.58	2.60	1.86	5.54	1
1079	255659	0.05	0.09	2.02	7.29	1.20	0.95	0.79	1.68	0.22	1
1080	428189	0.20	0.41	2.02	0.05	0.31	0.75	0.65	9.69	0.69	1
1081	950470	2.48	5.00	2.02	1.00	1.18	6.48	1.57	0.95	0.92	1
1082	824044	0.09	0.18	2.01	0.11	1.13	0.92	1.59	6.92	1.39	1
1083	1456721	12.97	26.09	2.01	1.29	1.62	1.39	5.81	1.46	0.49	1
1084	757156	0.49	0.98	2.01	0.95	1.21	0.63	0.37	8.19	0.71	1
1085	252830	1.63	3.26	2.00	1.12	0.93	7.24	0.89	0.87	0.98	1

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
1086	24918	2.08	4.16	2.00	5.45	1.50	2.33	0.65	0.59	1.50	1
1087	1837296	25.34	50.73	2.00	1.13	1.00	1.62	5.66	1.33	1.27	1
1088	123539	0.73	1.46	2.00	1.18	1.05	6.39	1.19	1.19	0.99	1
1089	1461684	2.34	4.66	1.99	1.88	1.80	0.77	1.57	5.84	0.29	1
1090	1487207	5.60	11.14	1.99	1.05	1.01	1.86	6.15	1.30	0.56	1
1091	78022	7.99	15.78	1.98	2.00	0.48	0.69	1.76	0.57	6.35	1
1092	37665	0.03	0.06	1.96	1.33	0.87	1.28	1.57	0.30	6.37	1
1093	452545	0.57	1.12	1.96	1.27	1.70	1.67	5.10	0.52	1.47	1
1094	773568	0.12	0.23	1.95	0.56	2.83	0.27	0.83	7.14	0.09	1
1095	480964	0.35	0.69	1.95	0.70	0.61	0.97	1.65	7.29	0.49	1
1096	41074	0.21	0.40	1.95	0.77	1.40	0.53	5.73	0.84	2.42	1
1097	257342	0.51	0.99	1.95	1.38	1.30	5.48	1.16	1.50	0.86	1
1098	897595	0.85	1.66	1.94	1.40	0.89	1.10	0.89	1.63	5.75	1
1099	108378	0.02	0.03	1.94	2.53	0.85	0.47	0.57	0.57	6.65	1
1100	276911	0.21	0.40	1.94	0.63	0.65	0.75	0.39	8.19	1.03	1
1101	147075	0.07	0.14	1.93	0.12	5.30	0.81	2.48	2.74	0.13	1
1102	773331	10.48	20.23	1.93	0.68	0.73	2.31	5.88	1.27	0.71	1
1103	241077	3.25	6.25	1.93	0.86	1.38	1.48	5.67	1.46	0.69	1
1104	824074	0.18	0.34	1.92	8.92	0.68	0.53	0.51	0.32	0.57	1
1105	796078	0.09	0.18	1.92	1.61	0.75	1.57	1.28	0.11	6.21	1
1106	838616	1.21	2.31	1.91	0.59	0.58	7.48	0.87	1.12	0.85	1
1107	45501	0.12	0.22	1.91	2.63	2.45	0.05	5.68	0.18	0.48	1
1108	415278	0.51	0.97	1.90	1.12	0.89	5.04	0.98	0.97	2.40	1
1109	40289	0.10	0.19	1.89	1.50	2.20	0.90	5.58	0.36	0.83	1
1110	33984	0.26	0.48	1.89	0.99	0.03	1.22	1.69	7.10	0.33	1
1111	471641	4.72	8.92	1.89	6.06	1.75	0.60	1.19	0.80	0.95	1
1112	742887	0.36	0.68	1.89	1.23	1.29	1.28	1.68	5.14	0.72	1
1113	346523	1.01	1.90	1.89	2.65	5.94	1.07	0.52	0.54	0.60	1
1114	743228	0.36	0.67	1.88	0.82	0.76	0.49	5.87	1.57	1.79	1
1115	868702	0.04	0.08	1.88	0.25	5.80	1.45	1.99	1.54	0.25	1
1116	150798	1.20	2.25	1.87	0.95	6.61	0.98	0.62	0.79	1.29	1
1117	183556	0.28	0.52	1.87	5.21	1.11	1.34	1.43	1.10	1.02	1
1118	243905	0.19	0.35	1.86	0.27	1.33	2.60	1.31	5.59	0.08	1
1119	731404	0.92	1.72	1.86	1.31	0.90	5.72	1.23	1.27	0.73	1

Table 2-1: T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Av eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
1120	243321	1.08	2.00	1.86	0.92	0.88	1.02	5.71	1.84	0.89
1121	243803	0.84	1.19	1.86	1.16	1.11	1.11	1.15	1.05	5.57
1122	841610	0.06	0.11	1.86	1.70	5.30	2.13	0.17	1.87	0.17
1123	80371	1.21	2.24	1.85	0.50	6.17	1.41	0.72	1.21	1.09
1124	731028	0.08	0.15	1.85	1.88	2.25	0.69	5.70	0.12	0.87
1125	284882	0.33	0.81	1.85	0.44	0.82	0.56	5.74	2.61	0.92
1126	1031009	5.84	10.78	1.85	0.60	0.46	1.52	7.50	0.73	0.26
1127	1030637	0.76	1.41	1.85	1.20	1.32	5.23	1.03	1.16	1.13
1128	273168	0.15	0.27	1.84	1.65	0.62	0.64	2.12	5.94	0.07
1129	68317	8.85	16.25	1.84	6.02	2.40	0.49	0.22	0.60	1.28
1130	253931	1.11	2.03	1.83	0.86	0.96	6.40	1.04	0.80	0.92
1131	487088	2.58	4.69	1.82	0.88	0.91	5.53	1.44	1.09	1.05
1132	253598	1.38	2.50	1.81	0.86	0.87	5.81	0.92	0.75	1.68
1133	1058186	0.86	1.54	1.79	0.96	1.47	5.27	1.28	1.20	0.61
1134	1608837	31.95	57.14	1.79	1.13	0.53	1.83	5.43	0.98	0.82
1135	343731	0.08	0.11	1.78	0.21	5.41	1.10	2.06	0.17	1.77
1136	25058	0.09	0.15	1.78	0.12	0.55	1.10	7.92	0.89	0.12
1137	257387	2.69	4.78	1.78	0.89	1.40	1.21	5.01	1.13	1.03
1138	128058	1.13	2.00	1.77	0.80	0.64	6.31	0.75	1.01	1.13
1139	397604	0.18	0.32	1.76	0.81	0.97	0.61	0.83	6.53	0.83
1140	42271	0.02	0.04	1.76	2.06	0.50	0.88	0.50	0.50	6.13
1141	71674	0.24	0.42	1.76	0.04	7.34	1.28	0.30	0.30	1.28
1142	340849	0.17	0.30	1.74	0.46	0.91	5.79	2.19	1.04	0.06
1143	788256	0.10	0.17	1.73	0.19	5.20	1.99	0.10	2.82	0.10
1144	142397	0.66	1.13	1.72	0.90	1.00	1.06	0.97	0.50	5.93
1145	66902	0.89	1.53	1.72	0.49	0.39	0.57	6.34	1.28	1.28
1146	26508	0.47	0.80	1.72	0.96	0.75	1.23	5.01	1.66	0.71
1147	489476	0.11	0.20	1.72	0.86	0.09	0.31	0.90	6.93	1.23
1148	785446	0.12	0.20	1.72	1.17	2.30	5.68	0.97	0.09	0.09
1149	471498	0.08	0.14	1.71	0.44	5.02	1.21	2.24	0.85	0.51
1150	745001	1.43	2.45	1.71	0.67	1.30	1.30	5.72	0.93	0.35
1151	609155	2.10	3.59	1.71	0.49	1.44	0.60	0.86	6.09	0.78
1152	786549	0.01	0.02	1.70	0.72	0.54	5.00	2.50	0.72	0.72
1153	363003	0.40	0.68	1.70	1.05	1.03	0.60	0.60	5.68	1.23

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
1154	271483	0.07	0.12	1.89	1.75	0.14	1.28	0.83	6.01	0.14	1
1155	46356	2.53	4.28	1.69	0.88	0.60	1.14	5.88	0.82	0.76	1
1156	825461	1.09	1.83	1.69	1.60	0.45	0.84	1.35	0.70	5.17	1
1157	1291950	0.32	0.55	1.69	1.71	1.08	0.81	0.41	0.91	5.18	1
1158	418197	0.98	1.60	1.66	0.87	0.68	6.32	0.82	0.78	0.50	1
1159	133358	0.61	1.01	1.66	1.52	0.76	1.20	5.19	0.64	0.82	1
1160	269806	0.08	0.10	1.85	0.27	2.45	0.38	1.34	5.30	0.16	1
1161	1293119	0.46	0.76	1.65	1.60	1.37	1.02	0.23	0.68	5.01	1
1162	789953	2.45	4.03	1.65	0.50	0.28	0.39	1.09	7.12	0.50	1
1163	772916	0.06	0.10	1.64	0.16	1.15	0.73	0.23	0.16	7.41	1
1164	31869	0.23	0.37	1.62	2.56	0.27	0.46	0.74	5.35	0.35	1
1165	84141	0.03	0.05	1.62	2.59	5.16	0.34	0.34	0.97	0.34	1
1166	969636	1.87	3.03	1.62	0.64	0.38	0.53	5.01	2.20	0.97	1
1167	810897	0.14	0.22	1.61	0.07	0.07	1.15	7.87	0.18	0.34	1
1168	37234	0.07	0.11	1.61	1.33	1.88	0.60	5.00	0.14	0.68	1
1169	186132	0.24	0.38	1.59	1.04	0.41	0.24	5.63	0.11	2.13	1
1170	112658	0.10	0.16	1.59	1.13	0.87	1.25	0.62	5.54	0.10	1
1171	796117	0.11	0.18	1.58	0.29	1.78	0.70	0.96	5.69	0.09	1
1172	41321	0.09	0.14	1.57	1.21	1.33	0.95	0.11	0.11	5.73	1
1173	429448	0.30	0.46	1.57	0.26	0.65	0.32	1.31	0.75	6.14	1
1174	882571	0.11	0.17	1.55	0.89	5.96	1.81	0.09	0.09	0.66	1
1175	448813	1.22	1.89	1.55	1.72	0.40	0.73	0.61	0.40	5.41	1
1176	49358	0.22	0.34	1.54	0.35	1.37	0.76	6.22	0.22	0.33	1
1177	810891	0.36	0.55	1.52	0.66	0.36	0.46	0.86	6.51	0.31	1
1178	594123	1.91	2.89	1.51	0.83	0.75	5.42	0.73	0.70	0.66	1
1179	869375	0.03	0.05	1.51	0.31	7.25	0.59	0.31	0.31	0.31	1
1180	128248	0.09	0.14	1.50	6.53	0.59	0.11	0.88	0.62	0.27	1
1181	22885	0.09	0.14	1.50	1.61	0.07	0.44	0.51	5.78	0.55	1
1182	286404	1.50	2.22	1.48	0.77	0.62	5.33	0.81	0.65	0.71	1
1183	366915	0.16	0.23	1.44	0.60	0.06	0.73	1.34	5.81	0.31	1
1184	591485	0.04	0.06	1.42	0.40	6.04	1.35	0.20	0.25	0.25	1
1185	344595	0.37	0.52	1.41	5.41	0.82	0.24	0.82	0.44	0.63	1
1186	781110	0.03	0.04	1.38	0.23	0.31	0.31	0.31	0.84	6.29	1
1187	291690	0.04	0.06	1.38	0.16	0.20	0.98	0.73	0.24	5.97	1

Table 2-1:T3NO vs. BPH: Genes upregulated 5 fold or higher in at least one tumor sample or 3 fold or higher in at least 2 tumor samples.

IMAGE Clone ID	Gen Bank Accession Number	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
1188	878489	1.05	1.44	1.37	0.74	0.52	0.53	0.42	5.54	0.49	1
1189	1492258	0.14	0.20	1.37	6.50	0.76	0.26	0.56	0.07	0.07	1
1190	565483	0.08	0.11	1.35	0.60	0.35	0.56	0.75	0.11	5.71	1
1191	488207	1.78	2.37	1.33	0.52	0.46	5.19	0.72	0.66	0.46	1
1192	42118	0.07	0.09	1.33	0.60	5.91	0.14	0.16	0.27	0.91	1
1193	52594	0.08	0.07	1.31	5.93	0.29	0.18	0.76	0.18	0.50	1
1194	854401	1.41	1.83	1.29	0.43	0.44	0.58	0.41	5.08	0.82	1
1195	307337	2.86	3.64	1.27	0.45	0.45	0.26	5.73	0.29	0.45	1
1196	377298	0.17	0.22	1.25	0.29	0.55	0.30	0.43	0.47	5.44	1
1197	592728	0.09	0.10	1.21	0.12	0.12	6.44	0.12	0.12	0.33	1
1198	322617	0.16	0.19	1.19	0.54	0.19	0.14	0.61	0.38	5.26	1
1199	503545	0.09	0.10	1.18	0.12	0.12	0.80	0.67	0.12	5.27	1

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor samples.

Table 2-2: T3NO vs BPH: Genes upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Intracellular Bound	AveBPH	AveTumor veBPH)	Fold(AveTumor/A veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM124/A veBPH)	# of Tumor Samples	
1	768180	AA453310	prostate		1.96	133.47	68	149.63	165.70	7.38	52.32	22.54	10.36	6
2	646037	AA196879	prostate		2.36	114.00	48	65.24	24.82	77.47	31.06	53.69	35.90	6
3	264701	N64640	prostate	Y	2.41	73.10	30	31.27	50.07	34.87	5.26	41.24	19.50	6
4	450049	AA703396	prostate	N/A	2.55	76.64	30	38.52	11.57	48.94	15.57	45.42	20.45	6
5	245768	N55266	-		0.01	0.21	22	11.34	8.80	10.09	19.72	21.41	63.61	6
6	281003	N50880	l-cell		24.05	423.65	18	22.19	20.64	22.40	15.57	11.61	13.29	6
7	136606	R35051		Y	2.66	44.36	17	28.78	41.52	9.28	10.57	6.71	7.21	6
8	133130	R23397	prostate	Y	1.48	25.46	17	30.48	41.34	6.15	9.24	10.23	5.96	6
9	838668	AA457235	prostate		3.44	46.10	13	11.55	50.28	3.85	4.31	3.32	7.01	6
10	179753	H61549	bone		0.01	0.12	12	9.28	11.84	11.99	10.01	17.09	10.66	6
11	1030655	AA821761	-	Y	1.24	12.57	10	7.99	15.61	11.93	6.14	4.27	15.03	6
12	51433	H20747	-		2.07	19.56	9	6.78	6.32	8.58	7.12	8.55	19.24	6
13	308066	H91003	-	Y	0.80	6.94	9	13.54	16.10	7.85	4.72	3.65	6.31	6
14	196976	R91398	-		0.50	3.83	8	5.89	6.60	8.91	5.51	12.71	6.41	6
15	21931	T72543	breast		0.29	1.97	7	3.24	10.05	6.80	7.18	5.75	8.20	6
16	262217	N79160	bone		0.06	0.42	7	3.94	10.11	7.14	10.04	4.07	5.11	6
17	825859	AA504764	-	N/A	1.91	12.19	6	6.28	4.64	5.38	5.13	5.23	11.57	6
18	426816	AA004681	-		0.10	0.60	6	6.54	8.44	8.60	4.79	4.07	3.73	6
19	195034	R88764	-		0.02	0.14	6	3.19	6.01	6.21	7.48	3.67	6.48	6
20	359701	AA011176	-	Maybe	2.91	12.87	4	3.21	3.87	3.89	8.96	3.53	3.06	6
21	243641	N48548	-		1.55	6.34	4	3.17	5.98	4.16	3.84	3.52	3.85	6
22	262035	H88688	-		0.22	0.86	4	3.77	4.13	3.55	4.47	3.77	4.01	6
23	287628	N62096	-		0.30	3.88	13	15.20	2.45	18.94	12.53	19.49	9.01	5
24	784166	AA432103	prostate		15.97	194.72	12	9.62	26.16	14.54	17.70	1.22	3.92	5
25	259374	N31952	prostate		1.29	13.52	10	7.91	24.39	10.24	5.27	13.28	1.75	5
26	210620	H67712	-		0.19	1.82	10	2.75	9.06	3.94	3.08	33.98	4.85	5
27	193923	R63407	brain	Y	17.59	158.73	9	10.87	18.00	7.67	13.10	1.22	3.27	5
28	37860	R61372	lung		0.09	0.74	8	9.46	28.73	3.79	3.02	4.81	0.54	5
29	1031599	AA609485	-		0.27	2.07	8	5.69	10.96	6.72	12.64	2.83	7.06	5
30	86160	T72336	bone		1.71	11.25	7	7.39	5.16	4.03	15.83	2.66	4.49	5
31	268211	N29968	prostate		0.57	3.71	6	8.59	3.86	13.77	2.12	4.36	6.18	5
32	462468	AA596885	-	N/A	0.36	2.39	6	5.95	10.82	5.48	10.02	1.94	3.81	5
33	866276	AA663160	-	N/A	3.26	20.49	6	1.91	3.57	4.27	14.38	9.64	3.94	5
34	811682	AA454597	bone	Y	3.59	21.22	6	9.12	4.48	4.71	6.04	2.89	8.45	5
35	428436	AA004412	-		0.53	3.12	6	1.13	4.85	4.73	5.71	11.11	7.68	5
36	130136	R20813	-		0.04	0.20	6	7.23	6.80	5.30	5.38	6.96	2.06	5
37	347596	H61432	heart		0.04	0.24	6	2.99	4.97	4.10	6.44	3.72	11.48	5
38	765729	AA603291	unspecified		0.02	0.11	6	5.69	4.96	0.83	11.93	6.34	3.73	5

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Mo membrane Bound	AveBPH	AveTumor	Fold(AveTumor/A veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumors Samples
39	825785	AA505117	ovary	1.56	8.57	6	3.24	6.98	2.95	6.31	9.01	4.56	5
40	49858	H28290	brain	0.33	1.80	5	2.31	3.83	6.60	3.61	13.09	3.10	5
41	417075	W87823	-	0.83	4.38	5	2.79	3.52	3.68	4.21	8.09	9.54	5
42	840751	AA466071	-	1.73	9.09	5	3.31	10.29	3.87	2.36	7.56	4.13	5
43	241821	H83361	-	1.06	5.43	5	3.95	6.61	5.92	8.08	2.79	3.31	5
44	29063	R40970	prostate	1.88	8.52	5	4.28	6.83	4.57	7.80	4.62	2.43	5
45	124128	R01348	-	1.25	6.16	5	2.53	5.09	3.89	4.48	8.48	5.11	5
46	238821	H65030	lymph	4.70	23.13	5	2.33	3.91	3.66	11.43	4.02	4.20	5
47	134719	R28287	colon	0.29	1.40	5	5.02	7.58	4.08	5.94	3.53	2.93	5
48	287745	H62244	breast	3.81	18.41	5	2.38	4.28	3.75	9.64	3.82	5.12	5
49	271141	N34482	-	0.01	0.08	5	0.79	8.80	4.19	3.79	5.37	4.56	5
50	1240414	AA788780	-	0.79	3.60	5	1.68	4.13	3.48	7.19	6.34	4.47	5
51	307249	N85438	testis	3.36	15.26	5	9.25	5.31	0.40	5.39	3.29	3.63	5
52	763949	AA43688	ovary	0.13	0.59	4	4.82	5.19	6.45	4.87	1.71	4.04	5
53	897720	AA598982	brain	0.32	1.38	4	3.88	3.50	2.94	3.83	6.46	5.83	5
54	283070	N51297	testis	0.03	0.12	4	3.87	6.96	3.48	5.59	1.54	4.45	5
55	265005	N21081	skin	0.06	0.20	4	6.18	3.28	3.22	6.00	0.56	6.16	5
56	343987	W70234	bone	8.51	35.37	4	6.16	7.98	3.20	3.85	0.24	3.50	5
57	418855	W87281	-	0.46	1.88	4	2.15	7.06	3.45	3.09	5.14	3.31	5
58	842848	AA468281	lung	1.15	4.82	4	3.49	4.63	2.84	4.44	5.85	3.05	5
59	40699	R55982	brain	0.06	0.18	4	3.25	3.93	4.50	3.88	4.50	2.31	5
60	359661	AA011096	prostate	23.32	84.82	4	4.70	6.56	3.16	3.29	3.49	0.84	5
61	126230	R08307	brain	0.03	0.10	3	3.19	3.36	3.88	4.66	4.99	0.89	5
62	375682	AA032221	prostate	15.86	45.43	3	3.03	3.29	3.51	3.03	3.10	1.45	5
63	1468260	AA854928	-	0.65	22.36	34	18.89	48.11	59.34	106.24	0.80	19.00	4
64	743928	AA634379	bone	0.58	12.80	22	29.78	48.43	29.56	0.86	23.62	1.28	4
65	1390684	AA843582	prostate	1.84	33.09	18	49.03	48.43	3.22	1.15	2.77	3.51	4
66	41847	R52794	brain	0.40	6.34	16	9.65	9.81	1.44	57.03	15.40	1.72	4
67	744944	AA825880	prostate	1.90	22.42	12	2.76	4.13	1.86	8.52	48.21	5.35	4
68	1034473	AA779728	prostate	0.13	1.36	11	22.49	23.74	3.29	9.26	2.32	1.91	4
69	487165	AA045074	colon	0.01	0.09	9	13.49	10.45	13.83	13.97	1.00	1.00	4
70	1458424	AA862992	breast	0.06	0.69	8	10.16	21.53	1.58	24.39	4.84	2.76	4
71	360165	AA013260	prostate	0.01	0.11	8	10.07	0.73	2.20	10.46	1.44	2.63	4
72	144740	R76229	prostate	0.19	1.27	7	7.58	10.38	6.82	2.85	10.25	15.87	4
73	24916	R39066	-	0.93	5.97	6	3.07	2.31	4.37	2.35	3.29	3.29	4
74	563185	AA165678	muscle	9.70	60.24	6	6.66	5.08	10.11	2.19	1.74	10.42	4
75	1056172	AA820965	-	11.81	70.00	6	8.95	11.77	5.12	5.02	1.51	2.87	4
76	782363	AA431407	-	0.95	5.55	6	16.58	0.83	6.44	4.81	2.05	3.19	4
77	1031113	AA809914	-	0.01	0.07	5	2.80	6.47	9.51	6.43	5.07	2.77	4
78	481541	AA705256	breast	0.34	1.88	5	3.93	6.17	7.31	9.02	2.29	2.67	4
79	491706	AA118259	prostate	0.75	3.90	5	8.20	9.84	6.85	1.30	0.28	5.98	4
80	787638	AA452278	prostate	1.78	8.87	5							



Table 2-2: T3NO vs. BPH: Gene upregulated 5-fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Me brane Bound	AveBPH	AveTumor	Fold(AveTumor/A veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumors Samples
81	754034	AA478058	-		0.02	0.10	5	5.74	6.67	0.33	1.52	6.64	9.17	4
82	970590	AA653077	bone		0.04	0.18	5	3.02	13.78	4.92	2.90	1.71	3.26	4
83	68767	T53389	bone		0.02	0.08	5	1.66	3.59	10.99	8.52	0.64	4.09	4
84	262516	N68465	muscle		3.53	17.34	5	3.22	3.11	2.03	11.89	6.25	2.97	4
85	298210	N74392	l-cell		0.44	2.17	5	3.19	3.94	6.56	2.56	2.70	10.45	4
86	40402	R53089	hypothalamus		0.02	0.09	5	3.44	0.53	4.63	7.12	1.57	11.65	4
87	859153	AA633811	heart		0.05	0.24	5	1.99	4.80	2.74	9.28	4.42	5.71	4
88	704697	AA282253	breast		0.27	1.26	5	1.92	9.73	7.83	3.55	3.98	1.23	4
89	814306	AA458318	prostate		9.65	45.42	5	5.23	10.10	4.41	5.28	1.16	2.07	4
90	781233	AA446316	-		0.02	0.10	5	0.48	4.83	6.38	7.51	1.30	7.69	4
91	823794	AA490283	colon		1.70	7.94	5	3.60	10.81	5.89	3.38	1.85	2.40	4
92	260170	N32072	prostate		12.85	59.29	5	5.52	5.50	9.33	1.01	1.83	4.68	4
93	448309	AA777602	-	N/A	2.47	11.22	5	4.85	3.66	3.87	9.59	2.38	2.87	4
94	238155	H61758	-	Maybe	0.96	4.35	5	4.04	2.42	10.28	1.76	4.81	3.79	4
95	266879	W02256	unspecified		0.94	4.15	4	1.85	2.47	3.73	5.40	9.60	3.44	4
96	195397	R88915	-		0.47	2.07	4	5.34	6.46	6.39	1.35	5.02	1.71	4
97	428267	AA004628	unspecified		1.41	6.20	4	2.17	5.43	7.71	1.35	3.96	5.65	4
98	391884	AI003625	-	N/A	4.42	19.15	4	3.25	3.54	4.23	10.05	2.98	1.97	4
99	51700	H22854	brain		1.92	8.25	4	5.19	4.37	3.15	9.71	1.81	1.53	4
100	754284	AA478494	breast	Y	15.01	62.10	4	5.48	5.99	2.50	3.28	4.67	2.90	4
101	210897	H68840	colon	Maybe	0.75	3.08	4	1.97	3.35	4.59	7.43	6.18	1.28	4
102	809456	AA443090	bone		0.02	0.10	4	6.87	3.20	5.81	2.50	1.75	4.46	4
103	361659	W06189	skin	Maybe	6.37	28.06	4	2.88	6.98	3.63	4.72	4.28	2.07	4
104	148225	H13688	bone	Y	1.72	7.01	4	3.68	2.48	4.06	2.17	8.08	3.94	4
105	417867	W90128	breast		13.56	54.72	4	3.89	3.21	2.71	10.52	0.69	3.20	4
106	436531	AA703046	-	N/A	1.44	6.81	4	6.11	3.01	3.96	5.13	8.53	2.31	4
107	1031346	AA609106	hypothalamus		1.74	6.84	4	2.08	5.00	3.69	2.74	2.97	3.41	4
108	1587833	AA939276	brain	N/A	0.81	2.38	4	9.05	3.34	4.77	3.89	6.17	1.75	4
109	144747	R76247	brain		0.43	1.87	4	5.19	5.74	1.44	1.37	4.41	3.71	4
110	321388	W03272	l-cell		1.23	4.75	4	2.57	4.47	5.19	2.10	3.38	2.84	4
111	725285	AA291742	l-cell		0.05	0.19	4	6.40	3.53	3.79	8.85	1.28	0.83	4
112	259404	N25883	-		0.28	1.07	4	2.93	4.18	2.59	3.38	4.60	4.50	4
113	268692	N25920	-		1.81	6.68	4	2.34	3.33	3.82	2.44	4.10	5.95	4
114	283985	N53378	brain		3.58	13.06	4	4.67	6.61	2.55	4.74	3.85	0.49	4
115	359781	AA011320	colon		0.86	3.56	4	2.92	5.15	3.38	5.17	4.30	1.00	4
116	854701	AA630104	bone	Y	0.83	3.03	4	4.16	2.79	3.62	6.06	3.32	2.93	4
117	248868	H62081	breast		10.52	38.08	4	3.55	5.47	3.81	5.38	2.39	1.11	4
118	771053	AA427628	prostate		0.98	3.54	4	1.73	6.29	3.11	1.20	3.29	5.98	4
119	468010	AA045709	Neuron		11.33	40.58	4	1.21	4.61	5.01	4.80	4.57	1.28	4
120	112482	T80980	bone	N/A	0.03	0.10	4	5.81	3.02	3.15	2.19	2.78	4.53	4
121	86035	T62842	breast		0.96	3.38	4	2.09	3.77	3.86	1.92	5.82	3.66	4
122	855632	AA664104	-	N/A	0.96	3.38	4	2.09	3.77	3.86	1.92	5.82	3.66	4

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Me mbrane Bound	AveBPH	AveTumor	Fold(AveTumor/A veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumors Samples
123	811814	AA454868	-	N/A	2.96	10.39	4	3.92	5.10	3.87	3.79	2.79	1.62	4
124	281371	N47866	bone		0.36	1.25	3	5.38	3.04	3.53	2.17	2.42	4.40	4
125	353823	AA704850		Y	9.01	31.38	3	2.44	3.12	4.85	1.73	3.48	6.29	4
126	385400	AA787401	bone		2.20	7.66	3	2.28	5.31	3.00	4.08	4.16	2.08	4
127	138507	R63253	-	Y	1.41	4.88	3	1.74	4.81	3.90	3.23	4.16	2.85	4
128	289071	N63609	-	Y	19.85	68.00	3	3.37	5.09	1.36	1.59	6.06	3.28	4
129	460203	AA677461	-	N/A	0.55	1.89	3	1.81	4.23	4.13	4.28	4.93	1.55	4
130	242081	H60335	testis		2.71	9.21	3	5.12	6.73	3.43	3.25	0.92	0.95	4
131	207098	H48502	embryo		0.16	0.53	3	3.02	4.77	3.04	2.28	4.85	2.52	4
132	398639	AA758154	colon		0.66	2.24	3	1.87	6.82	3.24	4.80	1.60	3.25	4
133	206361	H64065	colon	Y	0.97	3.25	3	2.04	3.28	4.07	1.86	4.90	3.98	4
134	23897	R38364	-		0.38	1.24	3	1.98	3.91	5.86	3.28	1.47	3.16	4
135	1467808	AA883504	thymus	N/A	1.18	3.84	3	1.87	3.82	4.55	3.37	3.97	2.04	4
136	1558526	AA835560	prostate	N/A	1.17	3.77	3	3.58	5.88	3.20	0.99	4.48	1.12	4
137	491418	AA116537	breast		0.54	1.72	3	1.82	3.32	2.46	4.36	3.33	3.88	4
138	744001	AA829039	heart	N/A	3.87	12.24	3	1.80	3.05	3.27	4.18	5.11	1.80	4
139	283110	N63348	-		3.38	10.70	3	2.38	3.94	3.44	3.86	3.55	1.84	4
140	782047	AA429602	prostate	Maybe	1.17	3.67	3	3.28	2.51	3.73	2.89	3.22	3.21	4
141	454689	AA677206	-		1.02	3.16	3	2.09	3.15	1.89	3.87	3.10	4.59	4
142	384293	AA706370	-	N/A	0.50	1.53	3	4.26	3.84	4.05	3.20	1.06	1.87	4
143	34091	R44132	brain		0.53	1.83	3	2.04	3.94	3.79	3.14	3.71	1.82	4
144	743362	AA400365	prostate		0.03	0.09	3	3.33	3.10	2.06	4.16	0.88	4.58	4
145	128785	R10015	heart	Y	1.14	3.44	3	2.11	2.81	3.08	3.17	3.53	3.40	4
146	439299	AA007370	breast		1.28	3.83	3	3.22	3.29	1.89	3.35	2.22	3.84	4
147	136819	R36465	-		0.47	1.37	3	3.15	2.95	3.25	3.12	1.85	3.33	4
148	433350	AA700904	brain		42.83	123.16	3	3.66	5.22	3.12	1.22	0.47	3.55	4
149	758278	AA496349			0.11	0.50	3	3.57	4.82	3.03	1.81	0.36	3.03	4
150	270917	N32514	prostate	Y	0.01	0.23	26	64.92	1.13	1.13	14.34	134.44	1.13	3
151	782253	AA431721	bone		0.20	3.10	15	3.34	1.22	0.11	0.61	3.63	22.02	3
152	320485	W16659	spleen		0.06	0.86	14	1.39	3.75	0.97	71.36	3.78	2.68	3
153	283579	N64111	endothelial		0.98	12.80	13	0.73	1.52	4.77	26.47	44.85	2.05	3
154	281036	N47717	embryo		0.78	9.99	13	43.16	25.22	5.01	2.22	0.30	1.22	3
155	480718	AA115781	bone	Y	0.04	0.46	12	48.34	6.67	1.83	0.27	18.31	0.82	3
156	786747	AA443147	-		0.08	0.92	11	0.12	0.12	2.23	55.00	5.81	3.44	3
157	287728	N59158	prostate		0.51	5.43	11	20.89	31.93	7.51	1.25	0.86	1.67	3
158	282088	N48259	prostate		1.90	19.34	10	21.89	29.40	4.51	1.88	1.07	2.28	3
159	731280	AA116627	breast		4.08	33.97	8	14.84	26.99	4.51	1.28	0.78	4.21	3
160	470216	AA228987	prostate		2.95	23.82	8	1.97	4.75	1.05	5.39	32.26	2.68	3
161	376627	AA039851	heart		0.07	0.57	8	3.54	3.42	1.63	1.38	34.08	2.42	3
162	277714	N49877	-		0.13	0.94	7	0.87	3.83	1.15	32.30	5.88	0.12	3
163	757451	AA437241	-	N/A	0.47	3.37	7	4.87	30.78	1.10	3.68	0.99	1.36	3
164	486035	AA040861	muscle	N/A	5.25	35.89	7	2.41	4.29	2.80	21.89	8.58	1.59	3

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Membrane Bound	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM124/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumors Samples
165	208417	N74131	colon		0.08	0.48	6	13.15	18.83	1.72	1.58	1.47	3.24	3
166	668218	AA233809	skin		0.04	0.23	6	1.91	7.98	4.25	20.28	2.26	0.81	3
167	757389	AA437142	-		0.02	0.11	6	1.70	4.23	0.85	4.75	0.56	22.68	3
168	196168	R92362	-		0.59	3.32	6	1.71	1.65	2.16	16.65	4.09	7.34	3
169	667667	AA235370	hypothalamus		0.81	4.56	6	5.68	18.59	4.47	1.32	1.05	2.28	3
170	712950	AA282273	l-cell		5.93	32.98	6	6.81	14.24	8.62	0.72	0.88	2.12	3
171	504761	AA148735	bone		0.08	0.43	5	6.28	0.51	7.72	0.13	17.97	0.10	3
172	322443	W16424	adrenal		0.23	1.23	5	3.13	4.09	0.73	20.36	0.89	2.62	3
173	35010	R45118	-		0.66	3.31	5	2.72	4.85	2.60	1.65	11.48	6.66	3
174	782537	AA448484	testis		1.72	8.60	5	2.52	2.75	8.08	0.99	7.48	8.28	3
175	277596	N57002	bone	Y	1.48	7.34	5	7.68	12.12	2.17	0.90	1.13	5.84	3
176	773208	AA425650	skin		9.71	47.09	5	1.82	1.90	6.84	12.13	2.89	3.52	3
177	364865	AA035745	breast		0.44	2.09	5	1.52	1.24	13.33	0.96	7.22	4.39	3
178	247587	N58136	bone		0.01	0.05	5	1.96	14.29	1.91	4.85	3.94	0.89	3
179	34888	R19878	-		0.14	0.67	5	5.69	9.05	6.74	1.83	1.66	2.65	3
180	72395	T51539	placenta		0.08	0.36	5	0.67	16.34	4.47	1.37	4.55	0.13	3
181	773204	AA425692	bone		12.74	58.08	5	1.47	1.49	6.37	13.00	2.45	3.58	3
182	277327	N57483	brain		0.02	0.09	5	1.67	6.21	2.55	8.18	1.05	7.68	3
183	770066	AA430645	brain		7.36	33.36	5	7.28	8.45	8.19	0.54	0.26	2.38	3
184	61620	H19446	-		0.03	0.12	4	1.90	8.33	7.29	6.63	2.43	0.38	3
185	268343	N26556	-		0.70	3.10	4	8.62	9.86	4.53	0.84	0.94	1.83	3
186	298170	W02428	-		0.43	1.87	4	4.09	12.69	6.34	0.91	1.09	1.27	3
187	278504	N66139	brain		0.05	0.22	4	0.88	7.96	1.80	5.23	1.24	8.83	3
188	626567	AA128407	breast		0.02	0.07	4	3.30	1.87	0.98	9.74	0.64	9.67	3
189	808536	AA454570	lung		0.06	0.28	4	10.35	0.16	0.26	2.13	8.96	4.11	3
190	292958	N69499	-		0.05	0.22	4	0.48	1.96	0.68	3.72	15.21	3.80	3
191	295997	N73563	-		0.42	1.81	4	7.32	9.76	3.67	2.18	1.01	1.74	3
192	205628	H57585	prostate		0.51	2.18	4	7.68	2.40	5.57	1.28	1.92	6.79	3
193	67397	T49325	testis		0.01	0.06	4	5.28	7.99	0.68	0.90	0.68	9.45	3
194	611028	AA485373	breast		4.96	20.42	4	3.45	0.81	2.68	7.56	1.37	8.82	3
195	489637	AA101878	prostate	N/A	2.86	11.62	4	3.07	1.98	7.47	8.01	2.44	1.39	3
196	284624	N64796	-		1.58	6.38	4	2.09	6.18	6.46	2.24	5.69	1.52	3
197	641507	AA487365	lung	Y	1.06	4.28	4	10.98	2.50	4.10	3.36	1.15	2.06	3
198	882497	AA678604	bone		0.04	0.14	4	0.28	7.63	0.28	9.35	0.79	5.34	3
199	280155	N47012	-		0.06	0.25	4	2.52	2.29	7.11	2.63	4.99	4.00	3
200	1466768	AA583735	-	N/A	0.46	1.79	4	2.93	3.44	5.26	7.90	1.68	2.22	3
201	784589	AA443300	heart		0.03	0.10	4	3.05	1.55	3.64	1.86	1.93	11.30	3
202	723972	AA292583	bone		0.01	0.05	4	3.91	7.78	1.46	8.70	0.74	0.74	3
203	856174	AA630620	-		0.03	0.11	4	6.41	6.16	0.96	0.35	1.33	8.10	3
204	782575	AA447822	cervix		0.36	1.39	4	8.55	7.01	2.57	0.65	0.88	3.47	3
205	428166	AA001870	bone		2.28	8.77	4	1.91	3.10	4.57	10.12	1.60	1.76	3
206	566826	AA130857	Neuron	N/A	1.17	4.49	4	2.76	2.15	2.16	8.17	4.00	3.75	3

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Me mbrane Bound	AveBPH	AveTumor	Fold(AveTumor/ veBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
207	730638	AA417012	testis		0.02	0.08	4	7.50	0.49	0.49	7.80	2.29	4.30	3
208	837853	AA458578	lung	Y	7.85	29.78	4	3.78	5.93	1.10	2.48	8.86	2.62	3
209	503824	AA133959	brain		0.12	0.44	4	1.82	0.09	1.78	8.89	5.74	6.57	3
210	208210	H85286	placenta		0.89	3.34	4	5.28	5.92	7.33	1.88	0.76	1.81	3
211	427698	AA001841			0.11	0.43	4	3.08	1.05	3.00	3.88	0.51	11.00	3
212	123755	R01304	placenta		1.84	6.90	4	0.50	0.29	0.34	4.24	12.61	4.50	3
213	430153	AA703249	breast	N/A	14.14	52.21	4	1.02	1.89	3.14	8.23	5.08	2.80	3
214	143082	R71335			0.44	1.81	4	2.83	6.04	2.57	2.87	3.32	4.58	3
215	131599	R23727			0.18	0.80	4	5.05	2.39	1.92	1.07	4.57	6.14	3
216	240151	H82708	bone	Maybe	2.33	8.49	4	2.83	0.64	3.46	2.29	8.33	5.22	3
217	452116	AA707219	bone		0.44	1.81	4	2.41	7.49	2.14	6.14	2.91	2.55	3
218	201125	R88472	skin	N/A	1.05	3.81	4	3.93	4.00	2.20	4.29	1.20	2.78	3
219	128713	R07115			0.27	0.98	4	3.04	3.99	1.89	2.78	7.17	2.81	3
220	768179	AA424849	brain	N/A	2.58	9.08	4	2.85	6.36	3.23	3.77	2.33	2.51	3
221	250878	H85878	lung	Maybe	4.09	14.42	4	3.88	2.87	2.75	6.21	4.11	1.47	3
222	273499	N33283			0.09	0.32	4	2.12	3.80	3.48	7.92	1.84	1.82	3
223	755765	AA486455	muscle		1.95	6.84	4	2.82	1.80	1.82	4.71	3.01	7.18	3
224	815047	AA483188	bone		2.68	9.34	3	3.11	2.41	3.77	7.25	2.34	2.03	3
225	384870	AA709333		N/A	4.17	14.53	3	2.48	6.32	2.84	3.94	2.28	3.29	3
226	782200	AA431984	muscle		1.53	5.30	3	2.33	2.11	4.07	6.25	3.48	2.49	3
227	52730	H28500	brain		8.64	22.94	3	1.07	2.84	3.69	6.68	4.33	2.05	3
228	125311	R05810	lung	N/A	1.82	6.62	3	6.28	3.15	7.87	1.10	0.49	1.77	3
229	770880	AA434404	adrenal		8.05	27.88	3	1.43	3.88	2.58	5.27	5.89	1.71	3
230	798268	AA460827	breast	N/A	0.56	1.89	3	2.91	3.75	7.21	4.16	1.12	1.39	3
231	204146	H55920	prostate		2.07	7.07	3	9.82	3.38	1.53	3.98	0.90	0.90	3
232	811373	AA178833	lung		0.01	0.04	3	1.86	1.13	5.78	5.41	1.13	6.09	3
233	325380	AA284285	spleen		0.01	0.03	3	5.38	1.97	4.32	1.12	1.58	6.01	3
234	434822	AA703114			0.80	2.72	3	4.98	4.75	2.85	4.55	1.19	1.94	3
235	1049033	AA778676	heart		1.87	6.35	3	1.34	4.86	2.99	6.81	3.76	1.72	3
236	882483	AA878598			2.76	9.30	3	1.02	0.74	1.14	3.10	10.17	4.12	3
237	767130	AA424535	kidney		0.49	1.87	3	2.12	4.44	3.73	7.41	0.36	2.21	3
238	128321	R08479			0.03	0.10	3	1.97	3.57	3.44	2.89	8.21	0.15	3
239	230440	H78328		N/A	0.07	0.22	3	3.53	3.85	2.87	5.02	2.83	1.99	3
240	624271	AA191179	bone		6.78	22.81	3	4.22	9.13	4.42	0.88	0.96	0.68	3
241	123265	R00284	lymph	N/A	2.30	7.72	3	5.78	2.89	1.43	1.48	3.53	5.19	3
242	357236	W63638			0.72	2.40	3	2.37	4.72	5.60	0.96	3.48	2.80	3
243	123331	R00479	prostate		1.03	3.43	3	2.79	3.07	1.59	7.73	3.58	1.21	3
244	240884	H78134		Y	1.85	6.17	3	0.45	5.03	5.53	4.94	2.81	1.19	3
245	347182	W60811	brain		0.02	0.07	3	1.94	4.36	6.28	4.13	2.87	0.31	3
246	62082	H23232	prostate		0.03	0.11	3	2.02	4.53	3.17	4.45	2.72	2.83	3
247	180828	H25019	lymph	Y	0.41	1.36	3	1.98	2.43	7.21	1.55	3.28	3.34	3
248	1505394	AA605838	testis	N/A	1.11	3.68	3							

Table 2-2: T3NO vs. BPH: Gene upregulated 5-fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/membrane Bound	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumors Samples	
249	262053	H08812	t-cell		7.89	25.26	3	2.38	3.42	3.49	6.75	1.98	1.88	3
250	741087	AA178436	bone	Y	17.59	57.76	3	2.99	3.39	3.14	2.34	2.25	5.58	3
251	490178	AA121266	brain		3.50	11.48	3	2.84	4.34	2.28	4.85	1.83	3.72	3
252	208741	H63175		Y	0.09	0.30	3	2.00	4.61	3.24	2.64	2.82	4.27	3
253	416611	W86466	colon		3.63	11.85	3	2.01	2.14	2.13	5.36	4.86	3.07	3
254	416092	W85981	-		0.50	1.62	3	2.00	2.31	1.93	3.05	3.85	6.82	3
255	221561	H82525	-		0.55	1.79	3	1.18	1.35	0.19	1.43	6.94	9.06	3
256	223274	H86518	-		0.05	0.17	3	3.24	2.69	4.15	2.85	5.14	7.79	3
257	44397	H06525	brain		1.17	3.78	3	6.87	3.52	2.19	1.74	3.08	1.09	3
258	110787	T90839	brain		0.25	0.80	3	2.48	3.52	2.19	3.80	2.06	5.34	3
259	121948	T97782	brain		4.17	13.48	3	1.59	4.12	2.42	5.41	3.80	2.03	3
260	782812	AA448251	brain		0.06	0.18	3	4.87	5.06	1.22	2.93	3.17	2.10	3
261	145613	R77718	skin		0.87	2.16	3	1.90	4.01	2.87	3.29	2.74	4.45	3
262	433519	AA699631	bone	Maybe	6.14	19.70	3	2.30	5.27	1.85	5.80	5.20	3.25	3
263	210808	H68877	colon		1.41	4.52	3	1.59	2.24	3.47	3.20	2.11	6.82	3
264	197087	R83401	-	Maybe	0.36	1.16	3	1.88	1.56	2.43	2.00	3.28	2.91	3
265	416374	W86202	bone		3.18	10.13	3	4.89	3.63	2.60	5.86	1.06	3.06	3
266	1422794	AA327405	bone	N/A	2.02	6.43	3	2.60	3.91	1.59	8.08	3.23	0.45	3
267	137017	R35665	bone		0.03	0.08	3	1.47	4.27	2.53	3.68	3.77	2.92	3
268	267634	N34117	breast		0.21	0.66	3	2.32	3.85	2.43	1.60	1.72	4.54	3
269	433253	AA699427	breast		5.61	17.79	3	4.18	4.57	2.34	2.32	2.73	4.79	3
270	1475734	AA372692	Neuron	N/A	7.39	23.26	3	3.45	3.26	3.35	1.36	3.88	2.19	3
271	268676	N26026	-		0.51	1.59	3	1.46	6.62	3.62	1.33	2.11	2.80	3
272	79032	T61899	bone	Y	16.17	47.49	3	3.66	4.92	3.96	1.33	3.41	4.13	3
273	771023	AA427978	-	Y	1.12	3.51	3	2.45	3.57	2.85	2.35	3.41	3.37	3
274	811101	AA485676	brain		2.17	6.72	3	1.06	2.45	1.78	5.54	4.36	2.34	3
275	270127	N27935	-		0.66	2.04	3	3.94	3.31	2.15	1.27	5.53	1.27	3
276	448117	AA702480	-	N/A	2.65	8.16	3	3.50	2.77	3.84	5.73	3.43	2.39	3
277	796674	AA460557	t-cell		0.48	1.46	3	2.06	2.12	3.31	5.09	3.43	4.45	3
278	431296	AA882631	brain		0.48	1.47	3	1.65	4.32	2.32	3.80	1.77	4.45	3
279	214824	H71242	prostate		1.92	5.87	3	2.21	3.82	1.89	1.33	6.44	3.82	3
280	743323	AA400596	-		0.49	1.50	3	4.39	4.19	3.23	1.85	2.28	3.78	3
281	60350	T63245	liver	N/A	12.72	38.66	3	1.01	1.73	1.27	4.87	1.94	1.91	3
282	1900162	AA368739	kidney	N/A	1.89	5.73	3	2.12	4.97	5.41	2.32	1.71	3.69	3
283	268234	N29992	lung		1.72	5.20	3	2.45	3.22	3.83	3.02	2.70	3.08	3
284	199623	R66561	-		0.51	1.54	3	2.99	4.10	3.93	4.40	3.55	1.44	3
285	41306	R56877	-	N/A	19.83	60.07	3	2.41	3.80	2.96	4.91	1.14	1.06	3
286	785555	AA459679	colon		1.83	4.94	3	3.08	5.11	2.63	4.02	3.51	1.32	3
287	416808	W86779	-		0.57	1.71	3	1.77	4.00	2.37	4.16	4.88	1.97	3
288	242696	H84262	-		1.16	3.50	3	1.70	2.11	4.22	4.16	4.83	2.18	3
289	364352	AA022496	bone		0.03	0.08	3	2.52	0.36	4.22	3.89	4.83	2.18	3
290	244050	N34042	-		0.06	0.17	3	1.60	3.79	1.66	2.22	3.29	5.43	3

Table 2-2: T3NO vs. BPH: Gene upregulated 5-fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Membrane Bound	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumors Samples
281	544639	AA074677	skin	1.06	3.15	3	1.72	3.77	3.39	3.80	2.68	2.56	3
292	852520	AA653056		17.95	53.54	3	3.39	3.07	2.81	4.99	2.83	0.82	3
293	797000	AA653500	l-cell	0.11	0.33	3	1.54	3.21	1.65	6.62	1.07	4.77	3
294	1483252	AA666670	prostate	18.18	54.08	3	4.82	3.25	2.81	3.26	1.82	2.20	3
296	447416	AA702335	brain	1.15	3.41	3	5.58	4.11	2.12	1.04	3.10	1.84	3
298	1478308	AA977697	-	1.54	4.56	3	2.92	3.27	4.53	1.90	1.93	3.19	3
297	184134	H51039	-	0.22	0.65	3	1.35	3.39	3.86	2.74	3.89	2.47	3
298	1456037	AA653449	muscle	1.16	3.38	3	5.57	3.38	1.71	2.34	0.80	3.84	3
299	207039	H48278	-	0.83	2.42	3	2.76	3.98	2.31	3.06	2.04	3.43	3
300	263769	H99694	-	0.76	2.19	3	3.82	7.88	3.41	1.10	1.06	0.29	3
301	427930	AA001976	-	0.05	0.14	3	0.99	3.14	6.49	0.21	4.44	2.22	3
302	307244	H95187	heart	0.35	1.01	3	2.20	4.92	3.17	2.07	3.85	1.25	3
303	810843	AA498959	brain	0.06	0.17	3	1.34	3.15	1.41	5.84	4.41	1.44	3
304	1460820	AA659785	bone	3.82	10.49	3	2.35	2.11	3.29	1.97	3.43	4.83	3
305	26259	R20547	prostate	0.87	2.50	3	3.08	3.41	3.69	2.10	2.31	2.77	3
306	366164	AA052613	bone	0.01	0.03	3	3.87	3.77	1.00	1.23	1.00	6.23	3
307	282104	H51498	brain	0.93	2.66	3	2.66	4.75	3.79	1.52	0.39	3.94	3
308	344308	H070147	-	0.46	1.31	3	3.18	3.47	5.50	1.78	1.21	1.74	3
309	45325	H08725	prostate	2.19	6.17	3	2.20	3.24	3.18	3.52	2.33	2.40	3
310	196303	R62435	bone	0.04	0.11	3	2.56	4.53	3.04	2.46	3.30	0.85	3
311	267495	N25282	testis	1.59	4.40	3	3.68	3.24	2.59	3.41	1.52	2.19	3
312	757198	AA496133	-	0.85	1.78	3	3.73	4.87	3.45	1.24	1.90	1.53	3
313	204122	H61886	-	1.31	3.59	3	2.36	4.23	3.40	3.07	2.93	0.52	3
314	839545	AA489761	-	0.42	1.14	3	5.37	0.99	1.36	1.18	3.64	3.82	3
315	809094	AA454702	brain	0.02	0.05	3	0.54	0.56	3.30	2.89	4.45	4.47	3
316	126234	R06362	-	0.30	0.81	3	2.13	3.70	2.31	1.13	3.56	3.32	3
317	280407	N51563	unspecified	0.97	2.62	3	1.61	3.40	1.91	3.28	3.22	2.72	3
318	758284	AA404231	placenta	0.78	2.08	3	1.82	2.31	1.16	3.46	3.11	4.17	3
319	150314	H00817	l-cell	2.18	5.81	3	3.69	3.90	3.23	2.04	1.07	2.09	3
320	286936	N62896	-	0.04	0.11	3	1.59	3.47	3.00	0.99	2.99	3.97	3
321	757440	AA437226	-	0.05	0.13	3	0.21	4.19	1.79	4.52	0.21	5.08	3
322	176554	H45289	-	0.87	2.28	3	1.89	2.02	3.72	3.33	3.56	1.30	3
323	296057	N89989	heart	0.86	1.79	3	2.03	3.01	2.54	1.85	3.26	3.01	3
324	765299	AA496359	-	1.69	4.39	3	4.47	0.52	1.93	3.99	0.70	3.96	3
325	725321	AA291749	breast	0.87	2.27	3	3.21	3.07	3.61	2.30	1.82	1.73	3
326	1467631	AA553431	-	1.17	3.02	3	1.16	1.22	4.32	0.72	3.58	4.52	3
327	120097	T95151	Neuron	0.80	1.54	3	2.09	2.01	1.14	3.96	3.01	3.31	3
328	159455	H15746	brain	0.02	0.04	3	0.82	3.70	2.31	0.84	3.72	4.51	3
329	1460898	AA568802	-	6.57	16.82	3	1.39	3.08	1.94	2.32	3.41	3.22	3
330	757368	AA437126	heart	0.02	0.06	3	3.92	2.20	3.37	0.77	0.24	4.83	3
331	450612	AA592452	-	0.74	1.89	3	1.17	0.96	0.92	3.00	4.79	4.44	3
332	342643	H68141	bone	0.02	0.04	3	4.17	4.44	0.58	1.17	4.50	0.30	3

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Membrane Bound	AveBPH	AveTumor veBPH	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumors Samples
333	503741	AA131466	brain		1.05	2.85	3	3.31	3.85	1.37	1.19	1.85	3
334	784130	AA432075	prostate	Maybe	17.73	44.77	3	3.17	4.60	1.56	3.28	1.79	3
335	325370	W52208	bone		0.03	0.08	3	3.88	3.87	1.13	0.31	3.14	3
336	286663	N62394	kidney		0.78	1.95	3	3.07	3.96	1.90	1.37	3.87	3
337	344359	W73377	lung		0.07	0.18	2	0.90	3.52	3.08	7.02	0.08	3
338	53391	R18241	-		1.15	2.79	2	3.80	3.57	1.40	1.23	1.35	3
339	426823	AA008803	-		0.14	0.35	2	3.16	1.82	1.65	1.08	3.55	3
340	258242	N30655	-		0.82	1.49	2	3.61	3.23	4.12	0.85	2.32	3
341	255987	N27366	-		0.09	0.20	2	0.80	4.21	1.52	3.40	3.14	3
342	452068	AA707125	heart		0.88	2.03	2	1.29	3.24	3.19	3.01	1.39	3
343	585779	AA135870	prostate		20.89	46.64	2	2.43	3.80	3.57	0.38	3.18	3
344	126508	R10154	prostate		0.04	0.09	2	1.20	3.87	3.30	0.24	4.05	3
345	639048	AA487505	brain		0.38	0.76	2	4.12	3.45	3.04	0.88	0.82	3
346	690853	AA156162	endothelial		0.01	0.18	13	0.74	1.96	0.74	42.48	32.88	2
347	50787	H18833	brain		0.06	0.50	8	1.80	0.16	2.87	34.78	5.82	2
348	137864	R63085	skin		0.29	2.25	8	8.43	33.82	0.56	1.11	2.44	2
349	856585	AA689222	breast		0.12	0.94	8	1.48	0.70	9.43	32.14	1.71	2
350	151477	M02837	skin		1.19	8.16	7	7.32	29.35	0.49	0.46	2.55	2
351	81331	T60111		Y	0.47	3.19	7	15.33	19.31	1.64	0.88	1.40	2
352	52028	H22832	-		0.25	1.66	7	13.87	22.88	1.63	1.01	0.36	2
353	859827	AA686405	colon		0.08	0.53	8	1.07	0.12	0.52	31.38	5.36	2
354	429086	AA005198	-		0.22	1.39	8	0.88	0.41	1.35	18.48	16.17	2
355	264449	N21233	-		0.06	0.32	5	8.98	2.35	0.55	1.30	20.60	2
356	754358	AA436142	bone		8.25	44.96	5	2.04	2.77	2.77	11.30	12.03	2
357	767163	AA443950	Neuron		0.03	0.16	5	0.47	0.94	20.25	2.08	5.30	2
358	565235	AA136125	breast		18.25	89.08	5	7.86	2.52	1.47	0.81	2.40	2
359	47355	H10881			0.10	0.48	5	14.30	0.10	0.22	9.85	2.80	2
360	377898	AA777098	testis	N/A	3.49	15.28	4	5.72	11.88	1.29	2.30	2.82	2
361	745072	AA626275		N/A	0.45	1.95	4	6.41	14.50	1.41	1.47	0.93	2
362	79763	T63981	lung		0.16	0.71	4	1.17	1.07	1.48	0.06	14.64	2
363	1389018	AA855159	colon		0.05	0.20	4	11.10	10.86	0.82	0.21	1.46	2
364	263335	N51441	-		0.18	0.72	4	1.22	10.53	2.87	1.88	1.99	2
365	264631	N71861	-		0.02	0.07	4	2.68	8.36	0.83	0.82	10.57	2
366	1031203	AA609882	-		0.03	0.11	4	1.17	0.36	1.64	0.36	15.06	2
367	1048988	AA778636	endothelial	N/A	0.14	0.57	4	10.73	5.96	2.22	1.03	0.56	2
368	461698	AA682274	breast	N/A	10.27	38.51	4	0.81	2.56	8.45	6.08	1.64	2
369	50892	H17626	adrenal		0.31	1.18	4	1.87	2.88	2.21	5.65	6.87	2
370	362928	AA018980	brain		1.07	4.00	4	2.76	1.60	11.37	0.71	0.71	2
371	122178	T98615	-		0.03	0.11	4	0.85	8.21	1.94	0.20	10.81	2
372	246808	N53214	b		0.56	2.06	4	6.45	12.29	0.84	0.52	0.85	2
373	191866	H40350	-		0.61	2.24	4	2.33	6.76	2.88	5.39	1.99	2
374	185072	R71593	-		0.30	1.07	4	7.00	9.56	0.82	0.72	1.33	2

Table 2-2: T3NO vs. BPH: Gene upregulated 5 fold or higher in at least 2 tumor samples or 3 fold or higher in at least 3 tumor Samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Membrane Bound	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumors Samples
375	502436	AA134662	bone	1.10	3.94	4	1.28	2.12	2.17	7.62	1.52	6.75	2
376	250689	N69675	breast	0.01	0.03	4	6.95	1.08	1.08	1.03	10.16	1.05	2
377	510136	AA053239	muscle	0.03	0.10	4	6.17	0.37	7.88	1.98	1.85	2.87	2
378	878284	AA670280	-	2.85	9.83	3	1.42	1.16	2.71	7.18	5.80	2.39	2
379	280025	N58826	breast	0.55	1.82	3	2.20	5.29	1.81	6.92	1.99	1.86	2
380	84713	T74257	-	0.07	0.21	3	6.85	8.18	2.97	2.76	0.15	0.89	2
381	796848	AA60115	lung	9.12	29.44	3	1.38	0.93	1.89	8.52	1.56	5.09	2
382	48316	H15366	-	0.22	0.71	3	0.89	1.60	1.44	5.55	7.72	2.25	2
383	1684274	A003028	-	1.45	4.54	3	5.71	7.10	2.75	1.53	0.85	1.06	2
384	364555	AA022601	-	1.84	5.67	3	5.36	2.73	1.56	1.33	5.86	1.80	2
385	743688	AA029324	testis	1.27	3.90	3	2.60	2.21	5.26	5.17	1.89	1.28	2
386	50114	H18743	brain	2.07	5.53	3	2.59	6.02	0.45	5.94	0.35	0.70	2
387	342164	W63776	prostate	0.04	0.10	3	0.80	0.26	5.08	1.19	0.28	8.46	2
388	785407	AA453518	lung	0.13	0.32	2	0.33	0.97	1.47	5.45	0.82	5.82	2
389	110503	T89996	prostate	0.60	1.45	2	0.73	1.24	0.76	0.92	5.55	5.36	2



Table 2-3: T3NO vs. BPH: Genes upregulated 10 fold or higher in at least 2 tumor samples or 5 fold or higher in at least 3 tumor samples.

Table 2-3: T3NO vs BPH: Genes upregulated 10 fold or higher in at least 2 tumor samples or 5 fold or higher in at least 3 tumor samples.

tumor samples or 6 fold or higher in at least 3 tumor samples.														
Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Me mbrane Bound	AveBPH	AveTumor eBPH	Fold(AveTumor/Ave eBPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM124/A veBPH)	# of Tumor Samples	
1	788180	AA453310	prostate		1.96	133.47	67.99	149.63	165.70	7.38	52.32	22.54	10.36	6
2	646037	AA198979	prostate		2.38	114.00	47.98	85.24	24.82	77.47	31.06	53.59	35.90	6
3	284701	N64840	prostate	Y	2.41	73.10	30.37	31.27	50.07	34.87	5.26	41.24	19.50	6
4	450049	AA703398	prostate	N/A	2.55	76.64	30.08	38.52	11.57	48.94	15.57	45.42	20.45	6
5	245768	N53266	-		0.01	0.21	22.49	11.34	8.90	10.09	19.72	21.41	63.61	6
6	281003	N50890	l-cell		24.05	423.65	17.62	22.19	20.84	22.40	15.57	11.81	13.29	6
7	136605	R35051	prostate	Y	2.56	44.38	17.34	29.78	41.52	9.28	10.57	5.71	7.21	6
8	133130	R28397	prostate	Y	1.48	25.46	17.23	30.48	41.34	6.16	9.24	10.23	5.96	6
9	176753	N51549	bone		0.01	0.12	11.81	9.28	11.84	11.99	10.01	17.09	10.66	6
10	51433	N20747	-		2.07	19.56	9.43	6.78	6.32	8.58	7.12	8.55	19.24	6
11	195976	R01398	-		0.50	3.83	7.67	5.89	6.60	8.91	5.51	12.71	6.41	6
12	287328	N62096	-		0.30	3.88	12.94	15.20	2.45	18.94	12.53	19.49	9.01	5
13	259374	N31852	prostate		1.29	13.52	10.47	7.91	24.39	10.24	5.27	13.26	1.76	5
14	1030855	AA821761	-	Y	1.24	12.57	10.16	7.99	15.61	11.93	6.14	4.27	15.03	5
15	1031599	AA809485	-		0.27	2.07	7.85	5.69	10.96	6.72	12.64	2.83	7.06	5
16	21931	T72543	breast		0.29	1.97	6.87	3.24	10.05	6.80	7.18	5.75	8.20	5
17	825859	AA504784	-	N/A	1.91	12.19	6.37	6.28	4.94	5.38	5.13	5.23	11.57	5
18	130136	R20813	-		0.04	0.20	5.62	7.23	6.80	5.30	5.38	6.96	2.08	5
19	1468260	AA884928	-	N/A	0.65	22.36	34.16	18.89	1.89	59.34	105.24	0.80	19.00	4
20	743828	AA834379	bone		0.58	12.90	22.20	29.78	48.11	29.56	0.86	23.62	1.26	4
21	41647	R52764	brain		0.40	6.34	15.84	9.65	9.81	1.44	57.03	15.40	1.72	4
22	784168	AA432103	prostate		15.97	194.72	12.19	9.82	26.16	14.54	17.70	1.22	3.92	4
23	163923	R83407	brain	Y	17.59	158.73	9.02	10.87	18.00	7.67	13.10	1.22	3.27	4
24	487165	AA045074	colon		0.01	0.09	8.96	13.49	10.45	13.83	13.97	1.00	1.00	4
25	306066	N91003	-	Y	0.80	6.94	8.70	13.54	16.10	7.85	4.72	3.65	6.31	4
26	292217	N79190	bone		0.06	0.42	6.73	3.94	10.11	7.14	10.04	4.07	5.11	4
27	144740	R76229	prostate		0.19	1.27	6.55	7.58	10.38	6.62	10.46	1.64	2.63	4
28	482488	AA896895	-	N/A	0.38	2.39	6.34	5.95	10.82	5.48	10.02	1.94	3.81	4
29	1056172	AA820985	muscle		11.61	70.00	6.03	6.66	5.08	10.11	2.19	1.74	10.42	4
30	782383	AA431407	-		0.95	5.55	5.84	8.95	11.77	5.12	5.02	1.51	2.87	4
31	195034	R88764	-		0.02	0.14	5.94	3.19	6.01	6.21	7.48	3.67	8.48	4
32	461541	AA705258	-	N/A	0.34	1.88	5.48	2.60	6.47	9.51	6.43	5.07	2.77	4
33	787636	AA452278	prostate	Y	1.76	8.87	5.04	6.20	9.84	6.65	1.30	0.26	5.98	4
34	754004	AA479058	-		0.02	0.10	4.38	5.74	6.87	0.33	1.52	6.64	9.17	4
35	185387	R88915	-		0.47	2.07	4.08	5.34	6.46	6.39	1.35	5.02	1.71	4
36	836668	AA457235	prostate		3.44	46.10	13.39	11.55	50.28	3.85	4.31	3.32	7.01	3
37	281039	N47717	endothelial		0.78	9.99	12.85	43.16	25.22	5.01	2.22	0.30	1.22	3
38	490718	AA115761	embryo		0.04	0.46	12.37	46.34	6.87	1.83	0.27	18.31	0.82	3
39	744944	AA825890	prostate		1.90	22.42	11.81	2.76	4.13	1.86	8.52	48.21	5.35	3

Table 2-3: T3NO vs. BPH: Genes upregulated 10 fold or higher in at least 2 tumor samples or 5 fold or higher in at least 3 tumor samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/ membrane Bound	AveBPH	AveTumor	Fold(AveTumor/Ave BPH)	Fold(MPM120/A veBPH)	Fold(MPM121/A veBPH)	Fold(MPM124/A veBPH)	Fold(MPM122/A veBPH)	Fold(MPM123/A veBPH)	Fold(MPM125/A veBPH)	# of Tumor Samples
40	287726	N59156	-	Y	0.51	6.43	10.89	20.89	31.93	7.51	1.25	0.86	1.67	3
41	1034473	AA779728	prostate	N/A	0.13	1.36	10.50	22.49	23.74	3.29	9.26	2.32	1.91	3
42	1456424	AA862992	breast		0.08	0.69	8.20	10.16	21.53	1.58	8.31	4.84	2.76	3
43	360155	AA013260	bone		0.01	0.11	8.02	10.07	0.73	2.20	24.39	4.57	6.15	3
44	86160	T72336	prostate		1.71	11.25	6.59	7.39	5.16	4.03	16.83	2.66	4.49	3
45	268211	N29986	prostate		0.57	3.71	6.48	8.59	3.86	13.77	2.12	4.36	6.18	3
46	563165	AA165678	-	Y	9.70	60.24	6.21	9.37	12.99	2.46	6.80	2.35	3.29	3
47	428816	AA004681	bone		0.10	0.60	6.03	6.54	8.44	8.60	4.79	4.07	3.73	3
48	811582	AA454597	bone	Y	3.59	21.22	5.92	9.12	4.48	4.71	6.04	2.89	8.45	3
49	428436	AA004412	-		0.53	3.12	5.83	1.13	4.85	4.73	5.71	11.11	7.68	3
50	765729	AA460291	unspecified		0.02	0.11	5.58	5.68	4.96	0.83	11.93	6.34	3.73	3
51	712950	AA282273	l-cell		5.93	32.98	5.56	6.81	14.24	8.62	0.72	0.86	2.12	3
52	825785	AA505117	ovary		1.56	6.57	5.51	3.24	6.98	2.95	6.31	9.01	4.56	3
53	504761	AA148735	bone		0.08	0.43	5.45	6.26	0.51	7.72	0.13	17.97	0.10	3
54	491706	AA116259	breast		0.76	3.90	5.23	3.93	6.17	7.31	9.02	2.29	2.67	3
55	241821	H63391	-	N/A	1.06	5.43	5.10	3.95	6.81	5.92	8.06	2.79	3.31	3
56	782537	AA448484	testis		1.72	8.60	5.01	2.52	2.75	8.08	0.99	7.48	8.28	3
57	277596	N57002	bone	Y	1.48	7.34	4.97	7.68	12.12	2.17	0.90	1.13	5.84	3
58	124126	R01348	-	Y	1.25	6.16	4.92	2.53	5.09	3.89	4.46	8.48	5.11	3
59	134719	R28287	colon		0.29	1.40	4.85	5.02	7.59	4.08	5.94	3.53	2.93	3
60	814308	AA459318	prostate		9.65	45.42	4.71	5.23	10.10	4.41	5.26	1.16	2.07	3
61	781233	AA448316	-		0.02	0.10	4.70	0.48	4.83	6.38	7.51	1.30	7.69	3
62	34868	R19878	-		0.14	0.67	4.82	5.69	9.05	6.74	1.93	1.66	2.65	3
63	260170	N32072	prostate		12.85	59.29	4.61	5.52	5.50	9.33	1.01	1.63	4.68	3
64	277327	N57483	brain		0.02	0.09	4.56	1.97	6.21	2.55	8.18	1.05	7.88	3
65	307249	N63438	testis		3.36	15.26	4.54	9.25	5.31	0.40	5.39	3.29	3.63	3
66	770068	AA430545	brain		7.38	33.36	4.52	7.28	8.45	8.19	0.54	0.26	2.38	3
67	81620	H19449	-		0.03	0.12	4.49	1.90	8.33	7.29	6.63	2.43	0.39	3
68	428267	AA004628	unspecified		1.41	6.20	4.38	2.17	5.43	7.71	1.35	3.96	5.95	3
69	278504	N66139	brain		0.05	0.22	4.34	0.98	7.96	1.80	5.23	1.24	8.83	3
70	205628	H57565	prostate		0.51	2.18	4.28	7.69	2.40	5.57	1.28	1.92	6.79	3
71	265005	N21081	skin		0.05	0.20	4.23	6.18	3.28	3.22	6.00	0.56	6.16	3
72	67397	T49325	testis		0.01	0.08	4.16	5.28	7.99	0.88	0.90	0.66	9.45	3
73	284624	N64798	-		1.58	6.38	4.03	2.09	6.18	6.46	2.24	6.69	1.52	3
74	882487	AA676504	bone		0.04	0.14	3.94	0.28	7.63	0.28	9.35	0.79	5.34	3
75	856174	AA630820	bone		0.03	0.11	3.89	6.41	6.16	0.96	0.35	1.33	6.10	3
76	503824	AA133959	brain		0.12	0.44	3.78	1.62	0.09	1.78	6.89	6.74	6.57	3
77	208210	H65288	placenta		0.89	3.34	3.76	5.28	5.92	7.33	1.89	0.76	1.61	3
78	325380	AA264285	spleen		0.01	0.03	3.40	1.86	1.13	5.78	6.41	1.13	5.09	3
79	270617	N32814	prostate		0.01	0.23	25.92	3.34	1.13	1.13	14.34	134.44	1.13	2
80	1390864	AA843592	prostate		1.84	33.09	18.02	49.03	48.43	3.22	1.16	2.77	3.51	2
81	782233	AA431721	prostate	Y	0.20	3.10	15.42	64.92	1.22	0.11	0.61	3.63	22.02	2

Table 2-3: T3NO vs. BPH: Genes upregulated 10 fold or higher in at least 2 tumor samples or 5 fold or higher in at least 3 tumor samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	Secreted/Membrane Bound	AveBPH	AveTumor	Fold(AveTumor/AveBPH)	Fold(MPM120/AveBPH)	Fold(MPM121/AveBPH)	Fold(MPM122/AveBPH)	Fold(MPM123/AveBPH)	Fold(MPM125/AveBPH)	# of Tumor Samples
82	293579	N94111	spleen		0.96	12.90	13.42	0.73	1.52	4.77	29.47	44.95	2.05
83	590853	AA158162	endothelial		0.01	0.18	13.25	0.74	0.74	1.96	0.74	42.46	32.69
84	282089	N48259	prostate	Maybe	1.90	19.34	10.17	21.89	29.40	4.51	1.88	1.07	2.28
85	731290	AA416627	breast		4.08	33.97	8.32	14.84	26.99	1.81	1.28	0.78	4.21
86	81331	T80111			0.47	3.19	6.81	15.33	19.31	2.50	1.84	0.88	1.40
87	52028	H22932	-		0.25	1.86	8.69	13.87	22.88	0.57	1.83	1.01	0.36
88	24815	R39066	-		0.93	5.97	6.42	3.07	2.31	4.37	2.85	10.25	15.87
89	298417	N74131	colon		0.08	0.48	6.33	13.15	16.83	1.72	1.58	1.47	3.24
90	429086	AA005196	-		0.22	1.39	6.27	0.88	0.41	0.38	1.35	18.46	16.17
91	754358	AA436142	bone		8.25	44.98	5.45	2.04	2.77	1.77	2.77	11.30	12.03
92	1389018	AA855158	colon		0.05	0.20	4.11	11.10	10.86	0.50	0.52	0.21	1.48

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

Table 2-4: Poor vs Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.										
Order	IMAGE Clone ID	Accession No.	AveGood	AvePoor	Fold(AvePoor/AveGood)	Fold(mpm31/AveGood)	Fold(mpm32/AveGood)	Fold(mpm33/AveGood)	Fold(mpm34/AveGood)	# of Tumors
1	753076	AA436479	1.42	42.16	29.71	2.52	57.56	34.98	23.80	3
2	124071	R02586	0.53	3.21	6.08	0.59	16.64	3.34	3.64	3
3	346321	W79847	0.64	3.29	5.17	3.69	7.75	1.51	7.73	3
4	855624	AA664101	24.18	108.55	4.49	4.12	6.82	0.22	6.80	3
5	42325	R61073	13.03	52.25	4.01	4.90	5.91	4.66	0.57	3
6	287528		2.13	6.32	2.97	4.00	3.29	1.30	3.29	3
7	756595	AA444051	1.46	3.89	2.67	0.45	3.61	3.01	3.60	3
8	452374	AA700876	0.64	19.98	31.26	0.24	62.30	0.37	62.14	2
9	357105	W83315	0.87	8.54	9.81	0.81	25.33	12.26	0.86	2
10	460798	AA708152	1.24	6.95	5.61	0.47	17.80	3.83	0.33	2
11	284601	N76201	0.27	1.50	5.49	0.82	10.19	0.77	10.17	2
12	460487	AA677706	53.51	237.74	4.44	0.02	8.87	0.03	8.85	2
13	248412	N58558	0.86	3.63	4.25	0.95	7.66	0.75	7.64	2
14	212188	H68848	0.56	2.37	4.23	0.93	6.76	2.47	6.75	2
15	782513	AA432030	4.08	16.09	3.95	1.06	1.58	6.19	6.98	2
16	782513	AA432030	2.03	7.78	3.83	1.37	1.26	6.00	6.70	2
17	129128	R10935	0.38	1.47	3.81	0.92	3.71	0.70	9.92	2
18	854678	AA630084	6.04	21.23	3.52	1.40	4.21	2.50	5.95	2
19	362059	AA001431	1.47	5.16	3.51	1.66	5.87	0.66	5.86	2
20	454822	AA677388	0.60	2.09	3.47	0.37	6.64	0.26	6.62	2
21	308698	N92842	0.05	0.16	3.28	1.59	6.55	0.00	4.97	2
22	415768	W84751	1.20	3.83	3.19	0.75	5.82	0.36	5.81	2
23	489535	AA099262	3.91	12.41	3.17	5.95	0.84	1.37	4.54	2
24	384865	AA028171	0.80	2.53	3.17	3.39	2.18	4.93	2.18	2
25	740841	AA478298	53.79	169.35	3.15	1.55	5.32	0.41	5.31	2
26	241705	H91680	1.71	5.19	3.04	1.25	4.71	5.51	0.69	2
27	754559	AA406301	1.32	3.96	3.00	2.54	3.88	4.35	1.25	2
28	487327	AA045524	0.49	1.46	2.96	1.51	4.72	0.91	4.72	2
29	843098	AA488676	5.29	15.54	2.94	1.27	2.66	3.34	4.49	2

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

30	298303	N73958	0.22	0.65	2.94	0.99	4.79	1.18	4.79	2
31	815542	AA456886	1.41	4.08	2.90	1.32	1.80	4.07	4.42	2
32	782537	AA432049	1.48	4.26	2.87	0.83	0.86	4.85	4.95	2
33	324437	W46900	1.10	3.16	2.86	0.62	5.28	0.29	5.26	2
34	461759	AA682386	0.67	1.86	2.79	1.13	4.59	0.83	4.59	2
35	754393	AA436317	0.01	0.02	2.67	5.43	3.14	2.12	0.00	2
36	770983	AA428415	16.45	43.42	2.64	1.19	3.67	2.04	3.66	2
37	415692	W84716	0.65	1.70	2.60	1.72	3.82	1.06	3.81	2
38	435820	AA701519	1.20	3.12	2.59	3.20	1.28	3.41	2.47	2
39	823696	AA489743	1.17	3.00	2.56	0.92	1.43	3.94	3.92	2
40	811000	AA485508	7.79	19.45	2.50	0.66	4.20	0.94	4.19	2
41	754600	AA411384	6.54	15.91	2.43	1.99	1.25	3.06	3.45	2
42	41214	R56898	0.08	0.19	2.43	1.43	3.22	1.85	3.21	2
43	898096	AA598795	3.43	8.05	2.35	1.11	1.22	3.21	3.86	2
44	1473304	AA916325	3.39	7.96	2.35	1.13	4.30	3.08	0.87	2
45	359835	AA011215	29.86	69.88	2.34	3.49	3.72	0.91	1.24	2
46	430231	AA010221	0.55	1.28	2.34	1.13	3.86	0.53	3.83	2
47	376516	AA041499	2.44	5.70	2.34	1.48	1.07	3.21	3.59	2
48	323238	W42812	2.09	4.88	2.34	0.57	4.18	0.41	4.17	2
49	770880	AA434502	20.98	48.48	2.31	0.42	3.59	1.65	3.58	2
50	303099	W20458	1.81	4.15	2.29	1.40	3.03	1.72	3.02	2
51	39959	R53558	0.06	0.13	2.21	1.76	3.34	0.34	3.39	2
52	138788	R63646	0.49	1.05	2.16	0.94	3.49	0.72	3.49	2
53	52071	H24350	0.21	0.44	2.15	1.28	3.16	0.97	3.19	2
54	47418	H11063	2.05	4.37	2.13	0.39	3.33	1.47	3.32	2
55	787938	AA452278	2.20	4.63	2.10	0.89	0.69	3.21	3.63	2
56	796806	AA461174	0.45	0.92	2.06	1.38	3.16	0.53	3.16	2
57	223350	H86554	0.70	1.35	1.93	0.44	3.45	0.36	3.44	2
58	510136	AA053684	0.05	0.09	1.88	0.16	3.22	0.95	3.20	2
59	741977	AA401441	4.15	7.71	1.86	0.53	3.20	0.51	3.19	2
60	812074	AA455988	0.74	6.43	8.67	0.85	0.65	31.70	1.47	1
61	305809	N90051	0.56	3.02	5.39	16.87	1.63	1.44	1.63	1
62	282104	N51498	1.64	7.68	4.69	0.58	0.71	2.08	15.38	1
63	795809	AA460511	3.68	17.08	4.65	16.11	1.02	0.64	0.82	1
64	161456	H25546	1.53	7.06	4.63	0.46	17.43	0.30	0.31	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

65	857442	AA782380	0.18	0.82	4.45	2.95	1.61	1.16	12.08	1
66	1455740	AA863204	0.09	0.39	4.41	15.34	0.92	0.97	0.42	1
67	141336	R63823	0.82	3.58	4.37	1.91	0.70	13.86	1.00	1
68	450948	AA704718	0.49	2.10	4.25	0.51	1.15	0.84	14.50	1
69	343919	W69960	1.16	4.89	4.23	1.38	0.94	1.26	13.33	1
70	192258	H41222	1.16	4.59	3.97	0.67	0.90	0.83	13.47	1
71	50930	H19128	1.68	6.59	3.97	2.12	0.52	12.60	0.62	1
72	1032774	AA628410	0.66	2.51	3.80	0.84	10.78	2.26	1.33	1
73	282117	N48261	0.81	3.06	3.78	1.08	1.21	0.90	11.93	1
74	773157	AA425382	0.86	3.20	3.74	0.62	1.09	12.18	1.09	1
75	320857	W38679	1.57	5.85	3.73	11.18	1.48	0.80	1.48	1
76	786657	AA451886	4.95	18.28	3.69	0.43	0.31	0.40	13.64	1
77	44351	H06093	0.09	0.32	3.55	1.03	11.31	1.26	0.61	1
78	284701	N64840	20.71	73.02	3.53	7.91	1.97	1.81	2.41	1
79	23790	T77410	0.87	3.01	3.48	1.73	1.14	2.20	8.86	1
80	324313	W47487	0.06	0.21	3.44	0.40	12.18	0.70	0.48	1
81	270343	N33041	0.22	0.73	3.35	10.97	0.92	0.66	0.84	1
82	122782	T99719	0.04	0.15	3.32	11.67	0.96	0.44	0.20	1
83	788386	AA456413	0.89	2.94	3.31	1.64	0.92	0.86	9.83	1
84	325128	W48762	2.61	8.46	3.24	11.16	0.73	0.34	0.73	1
85	192401	H38425	0.27	0.85	3.18	0.87	2.00	0.96	8.89	1
86	43207	H12981	0.48	1.53	3.16	0.83	9.88	0.78	1.16	1
87	491001	AA136808	16.11	48.46	3.01	6.86	1.70	2.68	0.79	1
88	1493160	AA878880	2.32	6.88	2.97	8.81	1.47	1.13	0.45	1
89	307174	N91797	4.48	13.27	2.96	7.61	1.30	1.64	1.30	1
90	277423	N47738	0.81	2.40	2.96	8.34	1.20	1.08	1.20	1
91	50182	H17882	0.33	0.93	2.84	7.27	1.81	1.00	1.27	1
92	176904	H44861	1.06	2.99	2.81	2.20	0.57	7.98	0.51	1
93	306540	W31255	1.11	3.09	2.77	0.92	0.90	2.38	6.89	1
94	123331	R00480	1.76	4.88	2.77	0.56	7.08	1.72	1.71	1
95	592707	AA180806	0.03	0.09	2.76	6.45	2.28	0.77	1.55	1
96	512116	AA133721	2.28	6.25	2.75	4.47	2.89	2.52	1.10	1
97	842848	AA486281	12.01	32.44	2.70	5.87	2.16	0.62	2.15	1
98	897901	AA598659	0.91	2.47	2.70	4.79	2.01	1.70	2.30	1
99	365227	AA024898	1.07	2.89	2.70	5.78	1.41	1.42	2.18	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3-fold or higher in any one tumor sample.

100	435567	AA701931	0.88	2.38	2.69	1.67	1.47	0.96	6.67	1
101	1461664	AA85311	0.82	2.19	2.68	7.75	1.13	1.12	0.71	1
102	49630	H29256	0.94	2.51	2.67	6.78	0.67	1.48	1.74	1
103	283208	N51367	1.41	3.75	2.66	1.92	1.14	0.98	6.57	1
104	289599	N79738	8.12	21.09	2.60	4.83	1.26	2.34	1.96	1
105	230560	H75860	0.28	0.73	2.60	6.99	1.53	0.92	0.94	1
106	431296	AA682631	1.66	4.25	2.56	4.00	1.76	2.75	1.75	1
107	32381	R17982	3.00	7.65	2.55	5.46	2.25	1.08	1.41	1
108	345670	W76603	1.23	3.12	2.54	4.68	2.48	1.45	1.54	1
109	196257	R92601	2.99	7.59	2.54	1.46	1.12	4.64	2.93	1
110	361363		5.71	14.37	2.52	5.73	0.77	1.56	2.01	1
111	359781	AA010932	5.37	13.42	2.50	6.60	1.48	0.77	1.15	1
112	882511	AA676470	0.03	0.07	2.50	3.52	2.39	1.72	2.36	1
113	811766	AA443004	13.72	34.17	2.49	5.66	1.81	0.69	1.80	1
114	53162	R15409	0.63	1.57	2.48	0.78	0.93	1.41	6.80	1
115	120162	T95274	1.05	2.60	2.47	1.13	2.51	2.86	3.38	1
116	1470048	AA865464	2.41	5.92	2.45	1.38	3.23	2.51	2.70	1
117	1056203	AA621031	9.53	23.38	2.45	8.20	0.86	0.50	0.26	1
118	884514	AA629991	2.65	6.48	2.45	6.74	1.47	1.03	0.55	1
119	837908	AA434362	3.13	7.65	2.44	1.20	1.90	4.85	1.81	1
120	453218	AA704844	0.05	0.13	2.44	5.69	1.28	1.45	1.33	1
121	703930	AA278408	1.08	2.62	2.43	2.68	2.05	3.61	1.39	1
122	379920	AA778098	1.63	3.96	2.43	2.28	3.76	2.19	1.49	1
123	739237	AA421389	2.56	6.17	2.41	3.35	1.88	2.30	2.10	1
124	1636495	AA999953	0.69	1.65	2.39	0.80	6.02	2.03	0.72	1
125	265102	N27892	1.91	4.56	2.39	6.32	1.32	1.21	0.69	1
126	299412	N78101	1.96	4.66	2.37	3.80	2.52	1.94	1.24	1
127	1055737	AA628146	1.02	2.42	2.37	0.78	1.00	0.72	6.99	1
128	25590	R12183	0.16	0.38	2.36	5.15	1.11	1.60	1.59	1
129	396111	AA757732	0.74	1.74	2.35	0.61	1.15	0.98	6.65	1
130	206838	R98064	12.93	30.32	2.34	4.58	0.52	1.88	2.40	1
131	130046	R11587	11.15	26.12	2.34	1.88	1.29	4.92	1.29	1
132	1048794	AA621324	0.23	0.54	2.34	1.96	4.69	1.83	0.89	1
133	292071	W02342	0.06	0.13	2.33	6.89	0.65	0.53	1.26	1
134	269411	N26163	2.88	6.68	2.32	6.08	1.41	1.25	0.54	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3-fold or higher in any one tumor sample.

135	392405	AA708201	4.29	9.92	2.31	4.59	0.87	2.50	1.28	1
136	627688	AA197344	10.20	23.49	2.30	3.93	2.66	1.79	0.83	1
137	1325751	AA873089	0.76	1.74	2.30	5.17	1.74	1.52	0.78	1
138	345055	W76331	3.90	8.94	2.29	1.59	3.23	2.27	2.08	1
139	757135	AA444111	0.06	0.13	2.29	5.80	1.62	1.21	0.52	1
140	455179	AA676899	1.82	4.17	2.29	2.02	1.23	5.15	0.76	1
141	429678	AA011593	8.32	19.01	2.29	4.39	2.77	1.55	0.43	1
142	49687	H15250	0.58	1.33	2.28	2.29	1.86	3.12	1.85	1
143	33096	R44776	0.33	0.75	2.28	6.15	0.75	1.45	0.76	1
144	399577	AA733090	1.92	4.37	2.28	1.56	3.29	2.79	1.46	1
145	260187	N45398	1.86	4.23	2.27	4.74	1.80	1.20	1.35	1
146	743026	AA406059	0.48	1.08	2.27	1.21	2.82	1.63	3.42	1
147	309929	N95435	0.43	0.98	2.26	3.67	1.36	2.50	1.52	1
148	162077	H25689	0.68	1.52	2.26	6.43	1.13	0.95	0.51	1
149	245936	N55430	0.42	0.94	2.24	0.88	6.45	0.84	0.80	1
150	897901	AA598659	0.95	2.12	2.24	3.81	1.57	1.71	1.86	1
151	454798	AA677295	1.41	3.14	2.23	2.99	1.13	3.14	1.66	1
152	1055217	AA621457	0.34	0.76	2.23	6.07	1.02	1.03	0.81	1
153	376839	AA047618	0.02	0.05	2.21	4.18	1.67	1.44	1.55	1
154	1584505	AA971641	4.86	10.94	2.21	4.93	1.92	1.44	0.53	1
155	186623	R83896	1.53	3.38	2.20	0.68	2.59	2.50	3.05	1
156	704227	AA279409	0.65	1.43	2.20	1.28	0.86	1.15	5.48	1
157	504420	AA142913	3.50	7.66	2.19	5.06	0.87	1.33	1.70	1
158	364173	AA021434	0.02	0.05	2.18	0.80	1.13	1.04	5.74	1
159	428928	AA004973	3.66	7.96	2.17	4.62	1.55	1.34	1.18	1
160	297682	N69876	0.83	1.80	2.17	3.71	2.34	1.52	1.09	1
161	610374	AA171899	13.37	28.92	2.16	3.29	2.19	2.08	1.08	1
162	502436	AA134862	2.43	5.24	2.16	2.04	1.13	1.37	4.10	1
163	795322	AA454165	3.87	8.31	2.15	3.19	2.24	0.92	2.24	1
164	359661	AA011095	28.28	60.65	2.14	5.41	1.13	0.92	1.13	1
165	746148	AA419812	0.57	1.22	2.14	5.44	1.29	0.90	0.95	1
166	202521	H53141	2.66	5.69	2.14	3.03	1.52	1.84	2.18	1
167	449061	AA777417	0.27	0.58	2.14	0.67	1.29	5.68	0.92	1
168	684562	AA251386	5.24	11.18	2.13	2.51	1.19	1.66	3.17	1
169	878836	AA670428	0.54	1.14	2.13	0.82	0.97	5.76	0.97	1



Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

170	451898	AA706955	0.37	0.78	2.12	1.07	1.33	1.09	4.99	1
171	361668	W96187	42.83	90.65	2.12	1.07	0.88	1.69	4.82	1
172	199175	H83283	1.56	3.29	2.11	5.25	1.29	1.07	0.84	1
173	745524	AA626242	6.45	13.63	2.11	1.60	0.67	4.86	1.32	1
174	430235	AA010223	6.39	13.41	2.10	3.70	1.89	0.92	1.89	1
175	826099	AA521414	1.53	3.21	2.10	0.89	1.10	1.88	4.53	1
176	280508	N47308	1.12	2.34	2.09	4.19	1.04	1.47	1.65	1
177	813488	AA455565	13.37	27.88	2.08	2.34	1.65	1.24	3.11	1
178	788574	AA453040	1.28	2.66	2.08	1.31	1.16	3.06	2.79	1
179	480189	AA676948	0.38	0.79	2.07	4.30	1.36	1.24	1.39	1
180	1493107	AA876375	17.47	36.21	2.07	2.19	3.23	2.62	0.25	1
181	290702	N71769	0.33	0.69	2.07	1.94	0.86	1.57	3.92	1
182	624379	AA187789	0.93	1.92	2.07	5.14	0.73	0.96	1.44	1
183	469969	AA030046	1.69	3.48	2.06	1.18	1.79	3.50	1.78	1
184	341336	W58013	1.04	2.14	2.06	5.47	1.05	1.09	0.62	1
185	35575	R45964	8.23	16.88	2.05	0.93	0.60	0.71	5.97	1
186	470393	AA031513	4.69	9.61	2.05	0.20	7.72	0.13	0.15	1
187	359713	AA011185	3.29	6.73	2.05	3.72	1.29	1.68	1.50	1
188	781091	AA430242	0.53	1.09	2.04	2.42	1.36	3.03	1.36	1
189	46916	H09996	0.13	0.27	2.04	1.18	5.44	0.70	0.84	1
190	78946	T61792	1.01	2.06	2.04	3.74	1.12	2.17	1.12	1
191	460114	AA676840	1.64	3.34	2.04	3.01	1.74	1.67	1.74	1
192	1323328	AA872602	0.37	0.75	2.03	0.84	4.37	1.57	1.34	1
193	504927	AA151002	8.88	18.02	2.03	0.16	5.34	0.12	2.51	1
194	1574594	AA968896	6.75	13.69	2.03	1.27	2.82	3.10	0.94	1
195	264597	N20328	2.35	4.76	2.03	4.18	2.51	0.99	0.44	1
196	897822	AA598572	0.38	0.77	2.03	0.98	4.23	1.23	1.67	1
197	1031976	AA609983	2.60	5.26	2.03	4.55	1.63	1.34	0.59	1
198	595001	AA164782	2.11	4.26	2.02	4.11	1.81	1.49	0.69	1
199	491763	AA150507	0.68	1.38	2.02	3.08	2.01	0.99	2.01	1
200	324885	W48700	13.11	26.52	2.02	3.94	1.97	1.52	0.65	1
201	229573	H67292	4.84	9.77	2.02	2.57	3.14	1.72	0.65	1
202	824588	AA490985	3.71	7.47	2.02	3.79	2.06	1.53	0.68	1
203	129148	R10948	1.57	3.17	2.02	1.28	1.19	4.20	1.39	1
204	46453	H09749	0.12	0.24	2.01	4.88	1.22	1.31	0.62	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

205	113284	T83857	2.93	5.87	2.00	3.60	1.73	1.35	1.34	1
206	283191	N51362	4.68	9.35	2.00	3.49	0.76	2.50	1.24	1
207	134265	R31114	0.45	0.91	1.99	4.80	0.96	1.20	1.02	1
208	665127	AA195601	9.63	19.17	1.99	3.49	1.88	1.69	0.90	1
209	127063	R07948	1.32	2.63	1.99	1.56	4.31	1.29	0.79	1
210	327247	W02073	0.08	0.16	1.98	1.09	5.08	1.17	0.59	1
211	268837	N26008	5.41	10.70	1.98	1.71	1.38	1.20	3.62	1
212	1505688	AA876435	1.93	3.81	1.98	0.81	0.80	4.84	1.46	1
213	855634	AA664105	2.48	4.90	1.98	1.29	2.01	3.49	1.11	1
214	322843	W15319	4.16	8.22	1.98	4.19	1.69	1.22	0.80	1
215	290346	N62293	1.85	3.66	1.98	2.02	1.44	1.25	3.20	1
216	811609	AA455825	0.13	0.25	1.97	3.98	1.55	1.07	1.30	1
217	69272		0.04	0.07	1.97	4.53	0.76	1.82	0.75	1
218	327495	W32729	0.04	0.09	1.97	5.03	0.95	1.38	0.51	1
219	686684	AA259115	1.40	2.75	1.96	3.92	1.33	1.09	1.50	1
220	610006	AA169173	0.87	1.71	1.96	3.22	1.54	1.28	1.78	1
221	190850	H38263	0.97	1.89	1.95	1.40	1.11	3.99	1.31	1
222	729853	AA399074	17.34	33.80	1.95	1.22	3.08	2.79	0.73	1
223	726699	AA399433	0.67	1.30	1.94	0.87	1.63	3.96	1.30	1
224	770319	AA434454	0.78	1.51	1.94	0.36	0.40	0.42	6.57	1
225	43966	H04828	0.01	0.02	1.93	0.00	3.64	2.03	2.06	1
226	743828	AA634379	2.44	4.71	1.93	1.86	3.99	1.05	0.82	1
227	23219	T77007	0.28	0.54	1.93	4.75	1.02	0.93	1.01	1
228	49858	H29290	0.53	1.01	1.92	4.71	0.98	1.03	0.97	1
229	24632	R39364	0.21	0.41	1.92	4.62	0.94	1.19	0.93	1
230	785816	AA449048	2.16	4.14	1.92	1.20	0.82	2.59	3.07	1
231	51420	H20717	0.35	0.68	1.92	4.33	1.10	1.15	1.09	1
232	124137	R01245	1.03	1.96	1.91	3.95	2.06	0.76	0.89	1
233	789091	AA453105	28.91	55.28	1.91	3.55	2.00	1.00	1.10	1
234	753663	AA478606	3.28	6.25	1.91	3.70	1.74	1.26	0.93	1
235	151597	H03146	0.95	1.81	1.90	1.10	1.80	3.06	1.65	1
236	346966	W79089	0.29	0.56	1.90	1.07	1.14	4.27	1.13	1
237	197056	R92801	4.71	8.94	1.90	3.66	1.77	1.19	0.97	1
238	132140	R23609	1.73	3.29	1.90	0.75	1.18	3.27	2.39	1
239	84078	T71061	2.13	4.03	1.89	0.05	6.77	0.67	0.09	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

240	78680	T61851	1.12	2.11	1.89	0.85	1.03	1.85	3.84	1
241	788136	AA453531	3.97	7.49	1.89	3.48	1.68	1.19	1.20	1
242	452926	AA682321	0.47	0.89	1.88	1.01	1.70	1.50	3.33	1
243	784016	AA443698	28.27	53.13	1.88	3.38	2.06	1.46	0.61	1
244	813719	AA453863	1.14	2.13	1.88	1.04	1.09	4.52	0.86	1
245	201641	R98344	1.40	2.63	1.88	1.20	0.56	4.05	1.70	1
246	590253	AA155787	1.88	3.49	1.85	3.06	1.96	1.38	1.01	1
247	739578	AA476861	4.47	8.26	1.85	3.36	1.38	1.44	1.21	1
248	265853	N20989	0.59	1.09	1.85	1.83	0.87	3.79	0.89	1
249	452466	AA704802	0.75	1.38	1.84	1.07	1.31	1.70	3.29	1
250	888652	AA684406	22.82	41.96	1.84	3.83	1.23	1.07	1.22	1
251	1031203	AA609982	0.29	0.53	1.83	3.78	1.06	1.44	1.05	1
252	23000	R38645	2.86	5.23	1.83	0.26	4.00	0.16	2.90	1
253	413300	AA772497	1.04	1.90	1.83	0.46	0.73	0.85	5.28	1
254	430763	AA677984	0.86	1.56	1.83	0.93	1.46	1.62	3.29	1
255	283328	N91744	1.64	2.99	1.82	1.17	0.71	3.89	1.52	1
256	713019	AA282594	1.36	2.48	1.82	3.18	1.62	1.84	0.63	1
257	770216	AA434117	1.48	2.68	1.82	1.30	0.84	2.00	3.13	1
258	454896	AA677397	6.74	12.19	1.81	3.23	1.65	1.22	1.14	1
259	417691	W88623	1.55	2.78	1.79	3.64	1.46	1.11	0.96	1
260	851022	AA620421	1.22	2.18	1.79	3.35	1.44	1.72	0.66	1
261	782787	AA448194	1.29	2.31	1.79	3.26	1.22	1.19	1.47	1
262	277112	N46759	1.42	2.53	1.78	1.53	1.28	0.73	3.60	1
263	1466485	AA885052	0.01	0.03	1.78	5.61	0.58	0.82	0.11	1
264	142844	R71124	1.57	2.80	1.78	4.15	1.07	1.26	0.63	1
265	470216	AA030004	4.81	8.55	1.78	3.92	0.69	1.06	1.44	1
266	206172	H61082	0.49	0.87	1.77	3.22	1.27	1.27	1.33	1
267	1048702	AA620611	2.31	4.09	1.77	3.27	1.93	1.17	0.71	1
268	40031	R53342	4.46	7.89	1.77	0.80	1.22	3.76	1.30	1
269	1505294	AA905838	1.49	2.64	1.77	1.19	1.27	3.39	1.21	1
270	1422784	AA827405	2.92	5.15	1.77	0.55	0.81	0.90	4.80	1
271	502593	AA126682	0.14	0.26	1.76	1.26	1.38	3.02	1.39	1
272	141815	R70684	3.99	7.01	1.76	3.41	0.92	1.79	0.92	1
273	1493079	AA876354	1.59	2.78	1.75	1.40	0.92	1.44	3.23	1
274	288648	W05033	6.25	10.90	1.74	1.02	1.28	1.09	3.61	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

275	731168	AA417344	1.30	2.27	1.74	3.73	1.24	1.11	0.89	1
276	25061	T81289	3.04	5.31	1.74	3.43	1.36	0.81	1.36	1
277	838688	AA457235	2.60	4.53	1.74	3.48	1.28	0.93	1.28	1
278	488913	AA057032	1.74	3.02	1.74	3.11	2.26	1.10	0.48	1
279	127610	R09179	16.74	29.04	1.74	3.75	0.59	1.53	1.07	1
280	812053	AA455980	1.23	2.13	1.73	0.81	1.60	1.38	3.13	1
281	1056172	AA620995	32.95	57.00	1.73	1.05	3.25	1.81	0.81	1
282	24958	R38943	3.00	5.19	1.73	3.45	2.31	0.87	0.28	1
283	345701	W71990	0.80	1.38	1.72	1.16	1.20	1.21	3.32	1
284	269172	N26608	0.34	0.58	1.72	1.08	1.22	3.37	1.21	1
285	796366	AA459761	20.52	35.33	1.72	3.62	1.45	1.42	0.40	1
286	682477	AA255551	2.94	5.05	1.72	1.41	3.33	1.42	0.71	1
287	249070	H80063	0.82	1.42	1.72	0.91	0.78	1.47	3.71	1
288	344108	W73724	4.15	7.12	1.72	3.01	1.43	1.70	0.73	1
289	147834	R81831	3.35	5.74	1.71	0.53	0.78	1.21	4.33	1
290	436097	AA700843	0.40	0.69	1.71	0.83	1.18	1.07	3.77	1
291	435919	AA701948	1.52	2.60	1.71	1.50	0.65	1.41	3.29	1
292	25122		0.48	0.82	1.71	0.91	0.51	4.89	0.53	1
293	812961	AA464598	1.01	1.74	1.71	0.94	0.95	1.33	3.62	1
294	488984	AA047260	36.82	62.95	1.71	3.27	1.63	1.09	0.84	1
295	416227	W86124	1.23	2.09	1.71	0.70	1.03	1.42	3.67	1
296	41608	R54179	0.19	0.33	1.70	4.47	0.57	0.95	0.83	1
297	813149	AA456695	12.62	21.50	1.70	3.29	1.50	0.99	1.05	1
298	1684274	AI003028	3.51	5.98	1.70	0.95	4.85	0.76	0.25	1
299	256680	H96392	1.91	3.24	1.70	1.42	3.15	1.78	0.45	1
300	243159	H94563	1.05	1.78	1.70	3.17	1.26	1.12	1.25	1
301	149058	R82317	1.86	3.16	1.70	1.22	1.11	1.46	3.00	1
302	220135	H84734	0.03	0.06	1.69	3.52	0.87	0.62	1.76	1
303	214713	H73806	0.04	0.07	1.68	3.15	2.51	0.91	0.16	1
304	757325	AA437093	0.54	0.90	1.68	0.95	1.01	1.33	3.43	1
305	810284	AA464068	6.53	10.94	1.68	3.23	0.81	1.31	1.35	1
306	868630	AA664389	28.46	47.59	1.67	3.18	1.18	1.15	1.17	1
307	399562	AA733061	3.54	5.91	1.67	3.11	1.21	1.65	0.72	1
308	731255	AA420992	5.28	8.82	1.67	3.66	0.80	1.23	0.99	1
309	1466942	AA883114	0.51	0.85	1.67	3.31	1.11	1.01	1.24	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or higher in any one tumor sample.

310	1461725	AA884397	0.14	0.23	1.67	1.20	0.92	1.25	3.30	1
311	1240347	AA788738	0.34	0.57	1.67	3.16	1.21	1.08	1.22	1
312	1592715	AA983362	0.09	0.15	1.66	3.86	1.00	1.09	0.71	1
313	395417	AA757417	25.66	42.64	1.66	0.80	0.68	1.29	3.88	1
314	21634	T65398	1.48	2.46	1.66	3.35	0.61	1.06	1.61	1
315	196038	R89358	1.70	2.82	1.65	3.30	0.86	1.08	1.38	1
316	193780	H48138	0.35	0.59	1.65	1.04	1.07	3.11	1.38	1
317	47527	H16439	2.44	4.02	1.64	1.27	3.00	1.45	0.87	1
318	1282593	AA719257	0.49	0.80	1.64	3.21	1.20	1.06	1.11	1
319	754313	AA479512	4.83	7.92	1.64	3.23	1.40	1.32	0.62	1
320	705064	AA279990	0.43	0.71	1.64	0.78	1.57	1.14	3.05	1
321	48454	H15040	0.17	0.28	1.63	3.06	0.58	1.21	1.68	1
322	825031	AA504239	7.43	12.12	1.63	3.22	2.19	0.77	0.34	1
323	212325	H68655	0.46	0.76	1.63	3.72	1.37	0.75	0.68	1
324	32784	R43553	5.83	9.47	1.62	3.08	0.59	1.24	1.58	1
325	491415	AA150422	3.54	5.76	1.62	3.80	0.84	1.03	0.84	1
326	32509	R43053	7.64	12.39	1.62	0.09	0.57	0.28	5.54	1
327	360885	AA012867	11.02	17.82	1.62	3.52	1.20	0.82	0.94	1
328	814460	AA459472	0.55	0.89	1.61	0.80	3.28	1.19	1.18	1
329	856289	AA774685	2.45	3.93	1.61	3.88	1.15	0.58	0.83	1
330	344272	W73748	2.02	3.25	1.61	3.11	0.96	1.25	1.11	1
331	841624	AA487676	1.31	2.10	1.61	0.71	0.77	4.10	0.85	1
332	530954	AA070435	3.00	4.80	1.60	3.08	1.45	1.23	0.65	1
333	278613	N48913	0.21	0.33	1.60	3.61	1.04	0.94	0.80	1
334	502518	AA156926	3.72	5.92	1.59	0.73	0.86	0.91	3.88	1
335	742132	AA406019	2.03	3.22	1.59	1.04	0.84	3.56	0.91	1
336	813755	AA453900	1.86	2.95	1.59	3.39	1.61	0.88	0.48	1
337	531862	AA116061	16.93	26.88	1.59	3.03	1.25	1.23	0.84	1
338	28270	R37357	1.43	2.27	1.58	0.99	3.05	1.60	0.70	1
339	594266	AA169606	4.86	7.70	1.58	3.12	1.38	1.04	0.79	1
340	47378	H11036	1.54	2.42	1.58	3.26	1.24	0.57	1.24	1
341	703943	AA279145	7.55	11.90	1.58	3.83	0.81	0.88	0.79	1
342	813256	AA456377	0.86	1.36	1.57	0.74	4.59	0.41	0.55	1
343	160730	H24580	1.12	1.75	1.56	3.04	0.58	1.31	1.32	1
344	52002	H23548	1.14	1.76	1.55	3.24	0.86	0.91	1.19	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes Upregulated 3-fold or higher in any one tumor sample.

345	204251	H59188	1.38	2.13	1.55	3.28	1.16	0.93	0.81	1
346	308223	W24648	0.79	1.22	1.55	0.78	0.90	1.06	3.45	1
347	712888	AA282159	6.43	9.93	1.54	3.59	1.45	0.66	0.47	1
348	951108	AA620486	2.04	3.15	1.54	0.58	0.79	0.86	3.94	1
349	743187	AA400002	1.45	2.24	1.54	1.00	0.70	0.68	3.79	1
350	66952	T69522	0.11	0.16	1.54	0.99	0.71	3.21	1.26	1
351	129589	R16541	0.92	1.41	1.54	0.59	3.16	1.98	0.42	1
352	461699	AA682274	5.46	8.37	1.53	3.63	1.03	0.75	0.72	1
353	452678	AA779225	0.40	0.61	1.52	0.71	1.06	3.06	1.26	1
354	186982	R93124	1.44	2.19	1.52	0.64	3.67	0.94	0.83	1
355	1501546	AA886792	0.94	1.42	1.52	0.86	3.03	1.48	0.70	1
356	754591	AA406320	3.70	5.60	1.51	0.83	0.54	0.56	4.14	1
357	703827	AA278842	1.39	2.09	1.51	0.78	1.00	1.13	3.11	1
358	1486752	AA912071	1.05	1.58	1.50	0.69	0.83	0.71	3.79	1
359	281045	N50904	0.98	1.47	1.50	0.93	0.85	3.38	0.85	1
360	505414	AA161248	0.06	0.09	1.47	0.78	3.03	1.63	0.43	1
361	179631	H51122	0.50	0.73	1.47	0.68	1.09	0.74	3.36	1
362	201125	R98472	9.68	14.17	1.46	3.64	1.24	0.76	0.22	1
363	753271	AA411668	1.04	1.51	1.46	0.94	0.87	0.95	3.08	1
364	46844	H10073	0.11	0.16	1.45	3.45	0.79	0.80	0.78	1
365	453988	AA779212	0.48	0.70	1.45	3.31	1.03	0.67	0.80	1
366	141548	R73088	1.37	1.98	1.44	0.86	0.70	0.51	3.69	1
367	151184	H02294	2.40	3.43	1.43	0.35	0.85	0.77	3.76	1
368	263897	H99672	8.21	11.76	1.43	3.35	1.55	0.52	0.31	1
369	845521	AA644563	1.84	2.63	1.43	3.26	0.74	1.12	0.61	1
370	428796	AA004671	0.06	0.09	1.43	0.79	3.16	0.91	0.86	1
371	124567	R01937	0.08	0.11	1.43	3.11	0.76	1.14	0.69	1
372	44300	H06377	2.96	4.22	1.42	1.02	0.50	0.96	3.22	1
373	454564	AA677025	0.87	1.23	1.41	3.29	0.79	0.81	0.76	1
374	196612	R92994	0.45	0.63	1.40	3.60	0.87	0.59	0.56	1
375	665774	AA193254	11.47	16.09	1.40	3.04	1.19	0.60	0.78	1
376	416305	W86183	0.80	1.11	1.40	0.88	3.65	0.57	0.50	1
377	773483	AA428014	9.13	12.76	1.40	3.08	1.03	0.71	0.77	1
378	244310	N54788	0.57	0.80	1.40	3.47	1.05	0.48	0.58	1
379	195751	R89082	1.31	1.83	1.39	3.29	1.17	0.74	0.37	1

Table 2-4: Poor vs. Good Clinical Outcome: Genes upregulated 3-fold or higher in any one tumor sample.

380	1474284	AA922309	2.61	3.59	1.38	0.53	3.15	0.82	0.99	1
381	451911	AA706869	1.35	1.84	1.36	0.74	0.80	0.69	3.23	1
382	357264	W93483	1.72	2.34	1.36	0.78	0.37	0.52	3.78	1
383	897952	AA598815	11.02	14.94	1.36	3.35	1.04	0.73	0.31	1
384	84464	T73883	3.20	4.30	1.35	0.53	0.78	3.28	0.78	1
385	277708	N49574	1.13	1.52	1.34	0.34	3.48	0.80	0.75	1
386	243741	N49629	2.79	3.71	1.33	0.46	3.86	0.49	0.51	1
387	563598	AA102670	1.07	1.41	1.32	0.66	3.67	0.54	0.39	1
388	376043	AA040265	0.43	0.57	1.32	3.50	0.70	0.36	0.70	1
389	784772	AA478542	1.01	1.30	1.30	0.59	3.06	0.70	0.84	1
390	544639	AA074677	4.08	5.27	1.29	3.08	0.88	0.73	0.49	1
391	222157	H85806	7.18	9.28	1.29	3.11	1.05	0.59	0.42	1
392	284100	N53421	2.03	2.54	1.25	0.85	0.53	3.10	0.52	1
393	42373	R67147	5.89	7.36	1.25	3.12	0.58	0.64	0.67	1
394	784017	AA443706	0.08	0.10	1.25	0.13	0.45	4.01	0.40	1
395	178860	H49519	4.98	6.03	1.21	3.10	0.45	0.85	0.45	1
396	741497	AA401137	1.82	2.20	1.21	0.47	3.65	0.36	0.37	1
397	380890	AA058597	3.53	4.23	1.20	3.25	0.72	0.56	0.28	1
398	1390584	AA843592	23.01	25.11	1.09	3.29	0.25	0.22	0.60	1
399	462325	AA705516	13.33	14.06	1.05	0.12	3.40	0.30	0.40	1
400	814053	AA465495	17.56	15.23	0.87	0.10	3.03	0.18	0.16	1

Table 2-5: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or more in at least 2 tumor samples

Table 2-5: Poor vs Good Clinical Outcome:  
Genes upregulated 3 fold or more in at least 2  
tumor samples.

Order	IMAGE Clone ID	Accession No.	AveGood	AvePoor	Fold(AvePoor/ AveGood)	Fold(mpm31/Av eGood)	Fold(mpm32/ AveGood)	Fold(mpm33/A veGood)	Fold(mpm34/Av eGood)	# of Tumor Samples
1	753076	AA436479	1.42	42.16	29.71	2.52	57.56	34.98	23.80	3
2	124071	R02586	0.53	3.21	6.08	0.69	16.64	3.34	3.64	3
3	346321	W78647	0.64	3.29	5.17	3.69	7.75	1.51	7.73	3
4	855624	AA664101	24.18	108.55	4.49	4.12	6.82	0.22	6.80	3
5	42325	R61073	13.03	52.25	4.01	4.90	5.91	4.66	0.57	3
6	287528		2.13	6.32	2.97	4.00	3.29	1.30	3.29	3
7	756595	AA444051	1.46	3.89	2.67	0.45	3.61	3.01	3.60	3
8	452374	AA700876	0.64	19.98	31.26	0.24	62.30	0.37	62.14	2
9	357105	W93315	0.87	8.54	9.81	0.81	25.33	12.26	0.86	2
10	460798	AA708152	1.24	6.95	5.61	0.47	17.80	3.83	0.33	2
11	284601	N76201	0.27	1.50	5.49	0.82	10.19	0.77	10.17	2
12	460487	AA677706	53.51	237.74	4.44	0.02	8.87	0.03	8.85	2
13	248412	N58558	0.86	3.63	4.25	0.95	7.66	0.75	7.64	2
14	212188	H68848	0.56	2.37	4.23	0.93	6.76	2.47	6.75	2
15	782513	AA432030	4.08	16.09	3.95	1.06	1.58	6.19	6.98	2
16	782513	AA432030	2.03	7.78	3.83	1.37	1.26	6.00	6.70	2
17	129128	R10935	0.38	1.47	3.81	0.92	3.71	0.70	9.92	2
18	854878	AA630084	8.04	21.23	3.52	1.40	4.21	2.50	5.95	2
19	362059	AA001431	1.47	5.16	3.51	1.66	5.87	0.66	5.86	2
20	454822	AA677388	0.60	2.09	3.47	0.37	6.64	0.26	6.62	2
21	308696	N92842	0.05	0.16	3.28	1.59	6.55	0.00	4.97	2
22	415766	W84751	1.20	3.83	3.19	0.75	5.82	0.36	5.81	2
23	489535	AA099262	3.91	12.41	3.17	5.95	0.84	1.37	4.54	2
24	364865	AA028171	0.80	2.53	3.17	3.39	2.18	4.93	2.18	2
25	740941	AA478298	53.79	169.35	3.15	1.55	5.32	0.41	5.31	2
26	241705	H91680	1.71	5.19	3.04	1.25	4.71	5.51	0.69	2
27	754559	AA406301	1.32	3.96	3.00	2.54	3.88	4.35	1.25	2
28	487327	AA045524	0.49	1.46	2.96	1.51	4.72	0.91	4.72	2
29	843098	AA488676	5.29	15.54	2.94	1.27	2.66	3.34	4.49	2
30	298303	N73858	0.22	0.65	2.94	0.99	4.79	1.18	4.79	2



Table 2-5: Poor vs. Good Clinical Outcome: Genes upregulated 3 fold or more in at least 2 tumor samples

31	815542	AA56886	1.41	4.08	2.90	1.32	1.80	4.07	4.42	2
32	782537	AA32049	1.48	4.28	2.87	0.83	0.86	4.85	4.95	2
33	324437	W46900	1.10	3.16	2.86	0.62	5.28	0.29	5.26	2
34	461759	AA682386	0.67	1.86	2.79	1.13	4.59	0.83	4.59	2
35	754393	AA36317	0.01	0.02	2.67	5.43	3.14	2.12	0.00	2
36	770983	AA28415	16.45	43.42	2.64	1.19	3.67	2.04	3.66	2
37	415692	W84716	0.65	1.70	2.60	1.72	3.82	1.06	3.81	2
38	435820	AA701519	1.20	3.12	2.59	3.20	1.28	3.41	2.47	2
39	823696	AA489743	1.17	3.00	2.56	0.92	1.43	3.94	3.92	2
40	811000	AA485508	7.79	19.45	2.50	0.66	4.20	0.94	4.19	2
41	754600	AA411384	6.54	15.91	2.43	1.99	1.25	3.06	3.45	2
42	41214	R56898	0.08	0.19	2.43	1.43	3.22	1.85	3.21	2
43	898096	AA598795	3.43	8.05	2.35	1.11	1.22	3.21	3.86	2
44	1473304	AA916325	3.39	7.96	2.35	1.13	4.30	3.08	0.87	2
45	359835	AA011215	29.86	69.88	2.34	3.49	3.72	0.91	1.24	2
46	430231	AA010221	0.55	1.28	2.34	1.13	3.86	0.53	3.83	2
47	376516	AA041499	2.44	5.70	2.34	1.48	1.07	3.21	3.59	2
48	323238	W42812	2.09	4.88	2.34	0.57	4.18	0.41	4.17	2
49	770880	AA434502	20.98	48.48	2.31	0.42	3.59	1.65	3.58	2
50	303089	W20458	1.81	4.15	2.29	1.40	3.03	1.72	3.02	2
51	39959	R53558	0.06	0.13	2.21	1.76	3.34	0.34	3.39	2
52	138788	R63646	0.49	1.05	2.16	0.94	3.49	0.72	3.49	2
53	52071	H24350	0.21	0.44	2.15	1.28	3.16	0.97	3.18	2
54	47418	H11063	2.05	4.37	2.13	0.39	3.33	1.47	3.32	2
55	787938	AA452278	2.20	4.63	2.10	0.89	0.69	3.21	3.63	2
56	798806	AA461174	0.45	0.92	2.06	1.38	3.16	0.53	3.16	2
57	223350	H86554	0.70	1.35	1.93	0.44	3.45	0.36	3.44	2
58	510136	AA053684	0.05	0.09	1.88	0.16	3.22	0.95	3.20	2
59	741977	AA401441	4.15	7.71	1.86	0.53	3.20	0.51	3.19	2

Table 2-6: Poor vs. Good Clinical Outcome Genes upregulated 5 fold or more in at least 2 tumor samples.

Table 2-6: Poor vs Good Clinical Outcome:  
Genes upregulated 5 fold or more in at least  
2 tumor samples

Order	IMAGE Clone Id	Accession No.	Tissue Distribution	AveGood	AvePoor	Fold(AvePoor/AveGood)	Fold(mpm31/AveGood)	Fold(mpm32/AveGood)	Fold(mpm33/AveGood)	Fold(mpm34/AveGood)	# of Tumors Samples
1	753076	AA436479	thymus	1.42	42.16	29.71	2.52	57.56	34.98	23.80	3
2	452374	AA700876	prostate	0.64	19.98	31.26	0.24	62.30	0.37	62.14	2
3	357105	W93315		0.87	8.54	9.81	0.81	25.33	12.26	0.86	2
4	284601	N76201	brain	0.27	1.50	5.49	0.82	10.19	0.77	10.17	2
5	346321	W74079	spleen	0.64	3.29	5.17	3.69	7.75	1.51	7.73	2
6	855624	AA664101	testis	24.18	108.55	4.49	4.12	6.82	0.22	6.80	2
7	460487	AA677706	bone	53.51	237.74	4.44	0.02	8.87	0.03	8.85	2
8	248412	N58558	liver	0.86	3.63	4.25	0.95	7.66	0.75	7.64	2
9	212188	H69148	liver	0.56	2.37	4.23	0.93	6.76	2.47	6.75	2
10	782513	AA432030	testis	4.08	16.09	3.95	1.06	1.58	6.19	6.98	2
11	782513	AA432030	testis	2.03	7.78	3.83	1.37	1.26	6.00	6.70	2
12	362059	AA001431	bone	1.47	5.16	3.51	1.66	5.87	0.68	5.86	2
13	454822	AA677388	colon	0.60	2.09	3.47	0.37	6.64	0.28	6.62	2
14	415766	W84751	heart	1.20	3.83	3.19	0.75	5.82	0.36	5.81	2
15	740941	AA478298	testis	53.79	169.35	3.15	1.55	5.32	0.41	5.31	2
16	324437	W46900	bone	1.10	3.16	2.86	0.62	5.28	0.29	5.28	2

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

Table 2-7: Good vs Poor Clinical Outcome:  
Genes upregulated 3 fold or more in at least 1  
tumor sample.

Order	Clone	Gen Bank Accession Number	AveGood	AvePoor	Fold(AveGood/AvePoor)	Fold(mpm27/Av ePoor)	Fold(mpm28/Av ePoor)	Fold(mpm29/Av ePoor)	Fold(mpm30/Av ePoor)	Fold(mpm35/Av ePoor)	# of Tumors Samples
1	298679	W05628	2.55	0.50	5.07	7.07	6.80	3.51	0.68	7.30	4
2	811162	AA486471	28.87	6.85	4.21	0.70	3.61	6.33	4.17	6.26	4
3	471641	AA034945	11.03	1.08	10.17	21.19	2.20	4.22	2.10	21.15	3
4	281039	N47717	36.67	4.42	8.29	22.87	1.40	0.27	9.85	7.08	3
5	282089	N48259	27.13	3.45	7.87	22.41	0.41	0.67	7.05	8.80	3
6	155072	R71393	3.32	0.45	7.44	8.50	1.97	1.30	9.52	15.90	3
7	208210	H65286	2.70	0.42	6.48	14.00	1.98	0.98	5.30	10.17	3
8	770066	AA430545	26.72	4.62	5.78	12.05	0.67	1.90	8.30	5.96	3
9	712950	AA282273	38.22	6.94	5.50	8.84	1.04	0.35	4.37	12.92	3
10	81331	T60111	4.13	0.82	5.03	11.18	1.30	0.80	8.59	3.28	3
11	287728	N59158	3.49	0.71	4.90	14.39	0.35	0.46	3.86	5.42	3
12	41228	R58953	0.05	0.01	4.38	9.07	2.53	4.46	2.14	3.71	3
13	122345	T99191	0.03	0.01	4.16	12.66	4.17	0.79	0.00	3.18	3
14	186918	H43317	6.27	1.60	3.93	3.28	1.41	1.33	4.30	9.31	3
15	1049033	AA778675	2.50	0.65	3.87	4.86	2.38	4.54	2.55	5.03	3
16	195365	R88904	1.81	0.50	3.62	6.03	1.45	0.88	3.51	6.23	3
17	50114	H16743	1.48	0.43	3.43	5.36	4.18	4.79	2.28	0.54	3
18	838611	AA456975	87.41	25.99	3.36	5.71	4.22	4.22	1.32	1.35	3
19	283196	N45282	5.16	1.55	3.32	7.31	0.87	1.42	3.24	3.77	3
20	745525	AA626248	4.16	1.27	3.28	5.86	1.71	0.34	4.76	3.74	3
21	159487	H15926	0.12	0.04	2.92	2.50	3.69	3.70	1.59	3.11	3
22	1034473	AA779728	76.12	27.06	2.81	2.22	3.21	3.87	0.79	3.97	3
23	138444	R68272	2.02	0.74	2.75	4.16	1.66	1.35	3.32	3.28	3
24	378488	AA777187	17.01	7.17	2.37	3.23	1.20	0.99	3.13	3.31	3
25	767130	AA424535	4.28	0.37	11.65	1.60	25.69	28.44	1.49	1.02	2
26	307337	N95226	10.81	0.96	11.29	1.65	7.47	44.45	1.65	1.22	2
27	502625	AA134576	7.27	0.90	8.08	1.44	1.15	33.58	1.04	3.17	2
28	41869	R68438	1.41	0.28	5.03	1.46	5.93	15.74	1.30	0.71	2
29	301735	N90882	4.10	0.90	4.56	9.05	2.75	2.93	0.99	7.09	2
30	136805	R35051	32.22	7.39	4.36	2.55	3.53	11.13	1.94	2.65	2
31	362278	AA001219	5.53	1.41	3.91	2.64	2.34	0.78	6.56	7.23	2
32	756708	AA443903	2.58	0.67	3.84	0.50	4.59	10.09	2.99	1.01	2
33	285028	N21084	1.22	0.32	3.78	1.00	4.36	11.96	0.59	0.98	2
34	1409509	AA868929	2.84	0.75	3.78	0.36	5.86	11.75	0.59	0.31	2
35	365707	AA025434	1.94	0.53	3.68	0.58	3.36	10.11	1.36	3.00	2
36	768953	AA424920	3.43	0.94	3.66	0.96	5.41	10.03	0.93	0.97	2
37	357628	W84121	1.80	0.49	3.65	5.62	0.55	0.68	2.00	9.41	2

**Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.**

38	35058	R45192	28.75	7.90	3.64	9.19	4.22	2.07	1.34	1.38
39	145740	R77948	30.23	8.55	3.53	1.47	0.52	0.73	5.51	9.44
40	757200	AA443967	0.08	0.02	3.51	1.63	2.44	1.32	3.97	8.17
41	856575	AA633658	13.79	4.11	3.36	1.01	1.91	2.38	6.90	4.57
42	731469	AA412417	3.83	1.14	3.35	3.72	2.54	5.00	2.74	2.75
43	140197	R66101	2.60	0.79	3.29	0.86	3.45	10.28	0.99	0.88
44	46166	H09076	12.10	3.68	3.29	8.38	1.09	0.51	2.55	3.90
45	123264	R00276	8.05	2.46	3.28	0.59	4.91	1.61	1.60	7.68
46	37980	R61372	8.83	0.25	3.26	8.99	3.72	2.26	0.96	0.35
47	1055707	AA628113	3.79	1.18	3.23	6.07	2.96	1.26	2.50	3.34
48	245277	N53447	7.05	2.22	3.18	8.02	1.26	0.59	2.35	3.69
49	878596	AA775257	5.91	1.88	3.14	7.62	1.48	0.91	2.42	3.25
50	66599	T67128	3.06	0.98	3.12	3.86	0.81	0.45	1.32	9.18
51	782335	AA432270	4.04	1.30	3.12	6.21	5.84	1.80	0.66	1.08
52	193087	H47076	0.06	0.02	3.11	3.68	0.71	1.77	0.49	8.89
53	151477	H02837	2.32	0.75	3.09	10.04	0.89	0.57	3.20	0.75
54	768020	AA418748	4.17	1.36	3.06	0.74	4.10	0.74	0.60	9.12
55	35329	R45517	1.82	0.64	2.86	3.39	2.99	4.46	1.70	1.75
56	245990	N55459	101.29	36.00	2.81	0.45	1.13	0.94	6.81	4.74
57	288983	N59816	2.12	0.75	2.81	0.82	1.41	1.52	4.53	5.77
58	646037	AA196979	98.80	35.15	2.81	0.92	6.21	3.16	1.58	2.19
59	434952	AA700680	1.23	0.45	2.77	1.83	3.75	6.22	0.82	1.24
60	231574	H92821	2.29	0.83	2.75	6.94	3.46	1.02	0.85	1.47
61	840590	AA487902	48.94	17.84	2.73	4.81	1.98	0.79	6.48	4.89
62	78353	T56281	39.72	14.62	2.72	0.58	0.96	1.14	2.55	3.34
63	1418621	AA878120	3.31	1.22	2.71	4.87	1.25	1.55	0.46	0.72
64	66902	T69477	2.93	1.09	2.68	0.63	4.28	7.31	2.85	1.24
65	823655	AA496988	6.96	2.61	2.67	3.01	2.02	4.22	2.85	0.76
66	246430	N53031	1.50	0.57	2.63	3.32	0.54	7.85	0.69	4.89
67	491751	AA150500	2.62	1.00	2.62	3.79	1.22	1.62	1.56	2.27
68	82905	T69305	3.92	1.50	2.62	3.41	2.68	1.71	3.01	3.42
69	346583	W74533	3.04	1.17	2.60	5.42	1.46	0.54	2.18	3.32
70	298417	N74131	6.38	2.46	2.60	1.63	0.37	0.65	4.00	6.33
71	51178	H17121	2.44	0.94	2.59	3.54	1.13	6.17	1.04	1.06
72	447416	AA702335	4.21	1.63	2.59	2.51	0.86	5.37	3.15	1.03
73	42872	R61883	0.81	0.32	2.55	2.17	1.20	2.58	3.69	3.11
74	232772	H72722	39.31	15.73	2.50	0.44	0.93	1.09	5.65	4.38
75	277173	N34316	19.49	7.91	2.46	1.63	3.19	5.67	1.21	0.61
76	795425	AA453526	1.87	0.77	2.44	0.43	4.91	5.03	1.21	0.63
77	743868	AA634431	3.37	1.38	2.44	0.61	3.72	2.12	2.49	3.26
78	40100	R54590	1.16	0.48	2.41	3.24	3.10	1.95	1.76	1.99
79	202535	H53340	52.42	21.78	2.41	0.31	0.53	0.61	6.54	4.04
80	267546	N23139	1.37	0.57	2.41	0.80	3.38	5.61	1.13	1.12
81	740604	AA479785	3.61	1.52	2.38	3.47	2.03	1.56	1.58	3.25
82	214441	H73590	3.93	1.66	2.37	0.70	3.78	0.22	0.28	6.89

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

83	364022	AA021586	3.15	1.33	2.36	3.36	1.42	0.76	2.42	3.86	2
84	295985	N67039	0.77	0.33	2.32	3.94	1.57	1.42	3.44	1.24	2
85	782575	AA447522	2.41	1.04	2.31	3.32	0.44	0.53	2.96	4.33	2
86	45852	H08862	0.84	0.37	2.30	3.12	1.55	1.05	3.80	1.96	2
87	66560	T67053	15.54	6.85	2.27	4.65	2.10	0.08	0.18	4.34	2
88	284383	N52151	2.85	1.26	2.26	2.81	0.65	0.30	4.10	3.45	2
89	813151	AA456299	1.57	0.70	2.23	4.73	1.49	3.31	0.74	0.90	2
90	813179	AA456321	4.78	2.14	2.23	3.34	0.83	0.42	4.69	1.87	2
91	855745	AA663981	28.11	12.67	2.22	0.76	5.59	0.11	0.24	4.40	2
92	1605539	AA888345	12.27	5.54	2.22	0.56	1.01	0.91	4.70	3.90	2
93	144747	R76247	3.07	1.40	2.20	3.06	0.82	2.15	3.63	1.32	2
94	50772	H16803	37.52	17.15	2.19	3.40	0.78	0.45	0.51	5.80	2
95	214162	H77766	34.05	15.57	2.19	0.17	0.51	0.43	5.78	4.05	2
96	247117	N57872	29.18	13.39	2.18	0.32	0.52	0.59	5.39	4.08	2
97	1468260	AA884926	6.47	2.98	2.17	1.03	4.41	0.25	0.23	4.96	2
98	179083	H50086	0.52	0.24	2.17	3.28	0.97	1.63	1.06	3.89	2
99	770868	AA434487	3.35	1.57	2.14	4.01	3.49	0.97	0.71	1.53	2
100	129585	R16596	22.38	10.50	2.13	0.34	0.49	0.49	5.39	3.95	2
101	324815	W49563	3.60	1.71	2.11	1.59	3.05	3.40	1.60	0.92	2
102	291097	N72137	7.69	3.65	2.11	0.89	1.35	3.00	1.67	3.62	2
103	530814	AA070226	47.09	22.41	2.10	3.61	0.50	0.93	2.03	3.44	2
104	1032405	AA778457	1.81	0.86	2.10	0.76	0.67	1.22	3.46	4.38	2
105	49303	H15677	0.62	0.30	2.09	3.99	0.93	0.64	1.07	3.80	2
106	1031701	AA609566	1.73	0.83	2.07	3.33	1.92	3.02	1.06	1.03	2
107	530185	AA111969	22.57	10.94	2.06	0.84	3.63	1.80	0.44	3.61	2
108	853998	AA668897	19.09	9.27	2.06	3.08	2.55	0.49	0.84	3.34	2
109	378813	AA683520	7.78	3.81	2.04	1.09	3.29	0.41	2.36	3.05	2
110	810899	AA459292	0.02	0.01	2.01	0.56	3.70	1.13	0.40	4.26	2
111	297392	N80129	50.71	25.44	1.99	0.27	0.58	0.52	4.51	4.08	2
112	471682	AA035558	4.12	2.07	1.99	0.76	1.69	0.98	3.19	3.30	2
113	27098	R36889	2.20	1.11	1.98	1.43	1.05	1.23	3.09	3.07	2
114	810873	AA459197	2.96	1.50	1.97	3.13	1.99	0.68	0.93	3.11	2
115	485854	AA040424	1.67	0.85	1.96	1.39	0.93	0.93	3.41	3.16	2
116	293292	N64706	2.97	1.51	1.96	1.40	0.75	0.78	3.03	3.85	2
117	289337	N92646	4.29	2.19	1.96	0.92	3.84	0.37	0.54	4.12	2
118	80948	T70057	15.71	8.31	1.89	1.25	3.02	0.38	0.58	4.24	2
119	838500	AA457528	1.44	0.76	1.89	0.74	0.90	0.85	3.49	3.47	2
120	343987	W70234	28.35	15.04	1.89	0.91	3.19	1.87	0.41	3.05	2
121	258300	N30680	25.74	13.84	1.86	0.55	3.33	4.05	0.75	0.61	2
122	824340	AA489666	5.85	3.24	1.80	0.42	0.66	0.52	3.65	3.76	2
123	884606	AA630006	37.58	21.21	1.77	0.69	1.44	0.21	3.37	3.15	2
124	132702	R27004	48.33	27.34	1.77	0.26	0.56	3.72	3.19	1.11	2
125	767449	AA418000	5.72	3.24	1.76	0.57	3.19	3.89	0.56	0.61	2
126	35804	R46000	1.59	0.94	1.69	0.36	3.18	3.81	0.63	0.49	2
127	1031113	AA609914	0.03	0.02	1.66	0.00	0.53	3.25	4.04	0.48	2

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

128	300051	N78927	19.97	0.85	23.41	0.70	0.74	112.76	1.75	1.08	1
129	278690	N48325	4.56	0.69	6.60	0.79	29.27	0.85	1.11	0.98	1
130	384015	AA702640	8.01	1.23	6.50	1.41	0.57	29.22	0.77	0.54	1
131	303139	N90806	2.77	0.50	5.50	22.37	1.05	0.71	2.45	0.91	1
132	455271	AA677574	4.56	0.90	5.09	0.45	1.08	22.44	1.00	0.47	1
133	844703	AA670123	6.75	1.44	4.69	0.65	1.51	20.07	0.72	0.47	1
134	841507	AA487385	4.47	1.11	4.04	1.25	1.30	2.10	0.96	14.57	1
135	427978	AA001834	1.51	0.38	3.99	1.46	0.93	0.99	1.52	15.05	1
136	275738	R93176	1.43	0.36	3.97	1.32	1.48	15.25	0.98	0.83	1
137	258063	N30328	1.93	0.49	3.95	15.18	1.72	1.03	0.81	1.02	1
138	1412481	AA845156	13.18	3.35	3.94	18.72	0.22	0.17	0.30	0.28	1
139	838856	AA464880	1.95	0.50	3.89	1.57	1.57	14.04	1.30	0.95	1
140	741831	AA402874	11.01	2.97	3.71	2.12	2.47	0.42	11.98	1.56	1
141	785265	AA454018	21.03	5.86	3.59	10.78	2.96	2.48	0.82	0.90	1
142	133130	R28397	16.43	4.72	3.48	1.50	2.78	8.53	1.78	2.81	1
143	611581	AA182848	1.54	0.47	3.25	2.26	0.92	10.97	0.92	1.20	1
144	812105	AA456008	2.56	0.83	3.08	9.47	2.24	1.28	0.97	1.44	1
145	433155	AA680136	17.91	5.90	3.03	0.97	1.78	12.03	0.14	0.25	1
146	430485	AA680186	11.29	3.77	3.00	11.19	1.53	0.30	0.45	1.53	1
147	1637302	AI005521	7.42	2.50	2.97	1.61	1.41	1.31	2.14	8.39	1
148	140131	R66006	1.79	0.62	2.90	7.23	2.08	1.24	2.35	1.63	1
149	197525	H52001	5.34	1.86	2.86	6.18	1.79	0.89	2.51	2.86	1
150	347429	W81196	1.14	0.40	2.84	2.06	1.67	6.33	2.72	1.53	1
151	123265	R00284	4.00	1.41	2.83	0.85	0.91	0.63	2.07	9.72	1
152	786525	AA452113	5.61	1.98	2.83	11.85	0.64	0.89	0.32	0.46	1
153	726835	AA398348	2.78	0.99	2.82	9.16	2.34	0.48	0.86	1.25	1
154	190325	H29897	4.39	1.56	2.81	2.20	1.37	7.51	1.74	1.22	1
155	172785	H20046	1.54	0.55	2.79	1.31	1.04	8.97	1.53	1.08	1
156	362419	AA018338	4.81	1.73	2.77	1.19	0.72	9.78	1.54	0.64	1
157	188151	H45810	2.40	0.87	2.77	7.19	1.65	1.37	1.53	2.10	1
158	47652	H11433	1.43	0.53	2.73	2.52	1.92	4.50	2.72	1.97	1
159	825736	AA504842	1.14	0.42	2.72	7.11	1.71	2.45	1.19	1.16	1
160	825719	AA504834	1.17	0.43	2.70	8.04	2.48	1.38	0.47	1.15	1
161	753770	AA408185	1.59	0.59	2.70	8.37	1.62	1.49	1.01	1.00	1
162	258242	N30655	0.86	0.32	2.69	7.33	2.56	1.46	1.31	0.78	1
163	308893	N94487	0.08	0.03	2.68	2.18	2.09	1.29	2.94	4.82	1
164	360213	AA013094	2.09	0.78	2.68	1.23	1.06	1.37	2.45	7.29	1
165	416374	W86202	27.30	10.28	2.66	2.26	0.82	6.98	2.34	0.89	1
166	259462	N28545	2.91	1.10	2.64	8.17	0.60	1.81	1.38	1.24	1
167	1049287	AA620757	1.35	0.51	2.63	1.18	1.66	2.31	6.91	1.09	1
168	293078	N88719	3.49	1.34	2.61	8.78	0.45	0.72	0.84	2.26	1
169	230317	H80853	1.51	0.58	2.60	7.04	1.84	1.86	0.88	1.37	1
170	430368	AA680070	1.46	0.57	2.57	0.95	1.03	0.82	1.51	8.56	1
171	123354	T99617	1.43	0.56	2.55	7.88	2.00	1.08	0.80	0.99	1
172	34129	R44684	0.24	0.09	2.53	6.15	1.57	1.33	1.08	2.52	1

**Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.**

173	814001	AA455654	0.47	0.19	2.50	2.49	1.73	6.37	0.60	1.31
174	509516	AA047340	1.99	0.80	2.50	5.32	2.07	1.21	2.93	0.97
175	757337	AA437099	6.18	2.48	2.49	2.25	2.76	5.79	0.81	0.84
176	1573251	AA953357	4.61	1.86	2.48	2.94	1.78	1.60	3.69	2.39
177	1031478	AA609218	2.42	0.98	2.48	1.39	8.09	1.08	0.87	0.96
178	46367	H09959	5.08	2.05	2.48	6.85	0.87	1.34	1.37	1.95
179	840967	AA486551	0.63	0.25	2.48	1.73	1.30	5.97	1.83	1.55
180	701819	AA287122	2.53	1.02	2.47	2.69	2.05	2.59	1.74	3.31
181	685801	AA262080	0.04	0.02	2.47	5.71	2.57	1.31	0.13	2.62
182	1492202	AA875913	4.20	1.70	2.47	0.42	8.64	2.07	0.62	0.58
183	810328	AA464143	3.11	1.27	2.46	2.81	1.79	2.31	3.29	2.09
184	128738	R09980	3.62	1.48	2.45	1.48	1.49	5.23	2.65	1.42
185	26736	R39891	24.84	10.13	2.45	5.94	2.27	2.79	0.58	0.68
186	277596	N57002	7.63	3.12	2.45	2.00	0.74	1.29	0.68	7.52
187	1049321	AA620783	0.12	0.05	2.44	6.15	2.44	1.71	0.50	1.41
188	812284	AA455087	5.18	2.13	2.44	2.76	3.00	3.50	1.44	1.48
189	756657	AA444083	1.98	0.82	2.43	6.14	2.83	1.08	1.02	1.09
190	375827	AA039851	0.74	0.31	2.42	5.00	0.91	2.14	2.50	1.53
191	451587	AA707086	2.17	0.90	2.41	2.98	3.68	1.47	1.77	2.16
192	773639	AA431887	2.93	1.22	2.40	3.34	1.57	2.97	2.96	1.18
193	471725	AA035450	3.23	1.34	2.40	1.30	2.63	5.01	1.45	1.63
194	239611	H79534	6.57	2.74	2.40	8.49	0.66	1.21	0.73	0.91
195	38554	R49731	1.45	0.61	2.40	1.00	2.75	5.81	1.20	1.23
196	291057	N72115	2.08	0.87	2.39	6.20	1.47	0.60	0.99	2.71
197	83920	T64312	8.32	3.48	2.39	1.83	1.62	4.41	2.58	1.52
198	368859	AA029578	1.44	0.61	2.38	0.40	0.93	8.86	0.86	0.85
199	490946	AA136818	9.95	4.19	2.38	2.79	1.26	0.38	1.71	5.74
200	24176	R39325	6.89	2.90	2.38	1.31	1.60	3.50	2.47	3.00
201	627351	AA190789	4.49	1.89	2.38	1.87	2.78	5.01	0.98	1.25
202	760299	AA425947	3.73	1.57	2.37	6.37	0.77	0.92	2.21	1.58
203	858849	AA666348	0.08	0.04	2.37	1.24	3.50	2.37	2.15	2.61
204	509731	AA045698	28.85	12.22	2.36	3.84	1.94	1.22	2.24	2.57
205	137984	R63085	1.00	0.42	2.36	7.58	0.87	0.59	1.84	0.90
206	1584628	AA972352	5.99	2.54	2.36	1.80	1.04	1.38	2.27	5.28
207	49354	H15089	1.57	0.67	2.35	3.82	0.92	1.73	2.46	2.83
208	280957	N50853	1.46	0.82	2.35	4.34	2.38	1.26	1.96	1.81
209	346712	W74653	0.19	0.08	2.34	1.35	2.45	2.07	2.15	3.70
210	273501	N33264	0.10	0.04	2.32	2.91	4.49	1.50	2.63	0.10
211	25052	R38891	0.68	0.29	2.32	7.79	0.96	1.15	0.70	1.01
212	1475648	AA872006	1.37	0.59	2.31	1.54	1.01	7.24	0.94	0.84
213	772416	AA405543	5.33	2.31	2.31	2.87	1.25	2.25	3.43	1.73
214	133341	R27193	3.83	1.66	2.31	6.09	1.78	1.50	1.04	1.12
215	212784	H89691	18.76	8.14	2.30	1.86	2.64	3.09	2.30	1.62
216	306013	N91385	0.79	0.35	2.29	5.46	2.95	1.04	0.75	1.26
217	416833	W86653	5.07	2.22	2.29	3.95	1.56	1.89	2.72	1.32

Table 2-7: Good vs. Poor Clinical Outcome: Genes Upregulated 3 fold or more in at least 1 tumor sample.

218	430336	AA010619	0.05	0.02	2.27	1.11	6.23	0.42	2.16	1.46	1
219	271050	N29914	2.05	0.90	2.27	0.84	1.34	0.63	1.63	6.91	1
220	488706	AA044906	3.97	1.76	2.26	0.61	2.73	4.11	1.96	1.85	1
221	177074	H40921	2.07	0.92	2.25	6.34	2.76	0.90	0.63	0.64	1
222	450382	AA703652	1.89	0.84	2.25	5.62	1.95	1.44	1.03	1.21	1
223	278808	N66572	0.35	0.15	2.25	2.17	1.95	3.50	1.83	1.80	1
224	814662	AA481045	2.35	1.05	2.25	2.63	1.95	3.19	1.73	1.73	1
225	203003	H54417	13.95	6.24	2.24	0.70	1.85	5.54	1.84	1.26	1
226	796480	AA460422	1.56	0.70	2.23	7.25	0.71	0.76	1.23	1.18	1
227	431553	AA676265	0.95	0.42	2.23	1.54	1.29	5.46	1.52	1.30	1
228	46958	H10342	0.44	0.20	2.22	1.18	2.44	5.42	1.14	0.85	1
229	85800	T72067	5.86	2.64	2.22	1.33	1.67	4.12	2.63	1.35	1
230	450049	AA703396	27.25	12.29	2.22	1.45	4.72	1.86	2.03	1.03	1
231	123971	R00884	8.43	3.81	2.21	1.06	2.58	1.20	1.44	4.78	1
232	568440	AA148862	3.86	1.75	2.21	0.96	1.59	4.58	1.98	1.92	1
233	380437	AA054135	1.62	0.74	2.20	3.76	0.89	2.73	1.67	1.94	1
234	852577	AA663092	0.14	0.06	2.19	1.15	2.11	2.11	0.95	4.63	1
235	45501	H08397	0.19	0.09	2.19	1.90	0.72	4.87	1.52	1.95	1
236	841684	AA487560	2.86	1.30	2.19	2.71	1.97	0.79	2.03	3.44	1
237	377368	AA055221	1.41	0.65	2.18	3.58	1.19	2.87	2.07	1.20	1
238	428377	AA005350	0.92	0.42	2.18	0.90	2.13	4.67	1.89	1.31	1
239	46620	H10036	6.81	3.12	2.17	5.62	1.46	1.83	0.67	1.32	1
240	296170	W02426	0.64	0.29	2.17	0.82	1.27	0.94	1.66	6.18	1
241	795755	AA460313	0.93	0.43	2.17	0.67	2.37	6.28	0.63	0.91	1
242	782306	AA432253	0.52	0.24	2.17	1.76	0.60	5.05	1.38	2.06	1
243	23869	R38179	0.46	0.21	2.17	1.13	1.51	1.93	3.94	2.32	1
244	245547	N55167	6.27	2.90	2.16	4.21	1.04	1.14	2.31	2.13	1
245	810459	AA457138	0.96	0.44	2.16	1.05	1.83	5.62	1.54	0.78	1
246	50922	H19324	0.13	0.08	2.16	2.03	1.74	1.78	3.03	2.22	1
247	213604	H72093	1.98	0.92	2.16	4.70	2.25	0.93	2.20	0.70	1
248	950710	AA608575	1.16	0.54	2.15	2.48	1.64	1.05	3.66	1.92	1
249	491196	AA137078	3.59	1.67	2.15	0.86	2.63	3.25	1.66	2.35	1
250	151067	H02039	1.35	0.63	2.15	1.70	1.61	4.58	0.93	1.92	1
251	745072	AA626275	1.44	0.67	2.14	7.11	1.02	1.03	0.75	0.82	1
252	506011	AA708438	10.58	4.96	2.13	2.42	1.78	1.54	1.79	3.15	1
253	809881	AA455151	9.38	4.40	2.13	1.25	1.42	2.39	3.13	2.49	1
254	49227	H15408	1.21	0.57	2.13	1.54	1.12	2.76	2.02	3.20	1
255	590338	AA156054	63.20	29.69	2.13	3.08	2.37	1.64	1.32	2.24	1
256	47597	H12081	0.14	0.07	2.13	2.25	1.76	2.45	1.07	3.11	1
257	1239985	AA706738	2.07	0.97	2.13	1.42	1.39	4.00	1.75	2.08	1
258	841621	AA487468	3.46	1.63	2.13	5.74	1.33	1.60	0.93	1.02	1
259	884682	AA629903	6.11	2.88	2.12	1.78	1.57	3.22	1.74	2.31	1
260	383199	AA074049	0.72	0.34	2.12	1.00	1.43	6.87	0.67	0.84	1
261	377692	AA056013	2.41	1.14	2.12	7.07	0.71	0.84	1.32	0.63	1
262	81320	T60063	1.49	0.70	2.11	5.29	2.02	1.49	0.63	1.14	1



Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

263	278242	N63567	1.21	0.57	2.11	0.88	0.96	7.10	0.79	0.82	1
264	1556526	AA935560	2.72	1.29	2.10	9.46	0.10	0.09	0.61	0.26	1
265	358531	W96134	2.02	0.96	2.10	2.07	1.42	1.00	4.75	1.28	1
266	67092	T56726	1.80	0.86	2.10	6.43	1.42	0.60	0.64	1.40	1
267	810998	AA485352	3.68	1.76	2.09	1.07	1.12	4.37	2.29	1.62	1
268	714498	AA282429	0.09	0.04	2.09	0.00	2.24	1.13	2.78	4.32	1
269	346119	W72749	0.02	0.01	2.09	0.00	1.48	0.31	8.66	0.00	1
270	396098	AA757717	0.83	0.40	2.09	1.64	1.33	2.69	0.97	3.82	1
271	433481	AA689573	0.95	0.45	2.09	1.22	2.98	4.22	0.96	1.07	1
272	358531	W96155	2.46	1.19	2.07	2.45	1.40	0.98	4.45	1.08	1
273	49665	H28710	0.50	0.24	2.07	1.15	1.50	1.51	1.66	4.54	1
274	505059	AA150918	2.08	1.01	2.07	2.74	1.41	0.80	2.07	3.33	1
275	288681	N82403	1.32	0.64	2.07	5.29	1.40	1.61	0.90	1.12	1
276	183432	H45447	0.86	0.41	2.07	4.85	1.29	2.17	0.99	1.04	1
277	84211	T72915	5.02	2.43	2.06	2.24	2.29	0.55	4.59	0.65	1
278	44563	H05445	0.98	0.47	2.06	4.16	1.53	0.71	1.33	2.59	1
279	134783	R31701	0.49	0.24	2.06	4.62	2.76	1.04	0.75	1.15	1
280	759948	AA424045	3.57	1.73	2.06	6.30	0.98	0.67	1.58	1.68	1
281	378461	AA775616	10.99	5.34	2.06	5.11	1.89	0.55	1.78	1.17	1
282	771274	AA443602	0.08	0.04	2.06	1.39	4.87	1.14	1.78	1.11	1
283	435036	AA700054	5.18	2.52	2.05	1.18	4.24	1.94	0.78	2.13	1
284	448885	AA777670	29.68	14.49	2.05	4.21	1.91	2.32	0.90	0.90	1
285	454589	AA677050	0.53	0.26	2.05	0.98	1.20	5.31	1.24	1.51	1
286	360684	AA015959	1.08	0.53	2.05	2.47	1.80	3.05	1.12	1.80	1
287	1603583	AA986131	15.75	7.71	2.04	2.88	1.58	0.31	1.64	3.81	1
288	162199	H26426	2.86	1.40	2.04	1.78	0.65	1.03	5.35	1.40	1
289	68988	T54164	1.22	0.60	2.04	2.54	4.68	1.98	0.42	0.55	1
290	80484	T64469	130.51	64.19	2.03	0.73	2.37	1.40	2.47	3.19	1
291	38691	R51535	1.32	0.65	2.03	4.04	1.44	2.18	1.40	1.09	1
292	123225	T99852	0.57	0.28	2.03	3.43	1.10	1.40	1.57	2.65	1
293	796313	AA461311	0.77	0.38	2.03	0.68	2.47	4.79	1.19	1.00	1
294	811827	AA463635	3.68	1.82	2.03	2.57	3.34	1.13	1.05	2.05	1
295	489079	AA057156	0.87	0.43	2.03	4.75	1.83	1.18	1.43	0.95	1
296	281659	N48050	1.97	0.97	2.02	6.75	1.03	0.68	0.83	0.83	1
297	241821	H93381	3.86	1.91	2.02	1.57	2.36	1.17	3.90	1.12	1
298	149373	H04382	0.81	0.40	2.02	1.63	1.24	1.27	2.54	3.42	1
299	76988	T61050	1.24	0.62	2.02	3.84	1.07	0.86	1.51	2.81	1
300	366039	AA071503	0.19	0.10	2.02	4.94	1.43	1.29	0.60	1.83	1
301	827152	AA521247	6.91	3.42	2.02	3.59	2.10	0.86	1.34	2.19	1
302	45623	H08424	2.14	1.06	2.02	3.32	1.03	2.08	1.84	1.81	1
303	785816	AA449762	0.07	0.03	2.02	3.95	1.65	1.67	1.36	1.46	1
304	209025	H63416	10.60	5.26	2.02	5.41	1.88	0.48	0.82	1.49	1
305	80221	T64223	3.49	1.73	2.01	2.79	1.82	0.49	1.70	3.27	1
306	242061	H93335	2.16	1.07	2.01	5.85	1.64	0.95	0.77	0.85	1
307	1631807	AI004169	5.46	2.71	2.01	1.57	0.75	1.76	4.12	1.86	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

308	506016	AA708440	9.52	4.73	2.01	2.43	1.27	3.33	1.54	1.49	1
309	190732	H38650	4.69	2.33	2.01	2.81	2.08	0.62	0.81	3.72	1
310	322537	W15263	1.85	0.92	2.01	0.81	1.81	5.26	1.42	0.73	1
311	249526	H84369	1.24	0.62	2.01	0.99	1.77	5.61	0.87	0.80	1
312	279905	N38860	1.54	0.77	2.00	5.19	1.06	1.08	1.56	1.13	1
313	858188	AA633866	0.92	0.46	2.00	1.73	3.32	2.15	1.52	1.31	1
314	856420	AA630771	22.32	11.14	2.00	3.60	1.35	2.39	1.03	1.66	1
315	249603	H84871	7.73	3.86	2.00	1.47	1.87	4.42	1.41	0.84	1
316	49333	H15417	0.09	0.04	1.99	2.04	1.11	1.08	4.19	1.54	1
317	233464	H77297	20.24	10.17	1.99	2.98	2.62	0.25	0.75	3.34	1
318	758366	AA404293	0.70	0.35	1.99	1.75	1.44	5.14	0.64	0.97	1
319	838899	AA464935	0.72	0.36	1.99	1.38	2.31	3.80	1.48	0.95	1
320	362628	AA017133	2.42	1.22	1.98	1.53	1.96	3.89	1.53	1.01	1
321	731031	AA421270	5.97	3.01	1.98	3.29	1.42	2.54	1.52	1.14	1
322	83999	T70892	4.15	2.09	1.98	3.41	1.82	1.29	1.54	1.84	1
323	416556	W86987	0.95	0.48	1.98	1.13	1.17	6.33	0.53	0.73	1
324	788334	AA453015	6.49	3.29	1.97	6.42	1.11	0.70	0.61	1.03	1
325	163841	H14057	2.99	1.52	1.97	5.23	1.98	0.99	0.73	0.93	1
326	307053	N89676	4.57	2.32	1.97	1.57	1.48	0.44	2.22	4.11	1
327	842918	AA486435	6.31	3.21	1.97	1.03	0.85	1.46	1.50	4.99	1
328	29954	R42520	0.54	0.28	1.96	1.44	2.60	3.71	0.65	1.41	1
329	183337	H42679	12.08	6.16	1.96	3.56	0.88	2.17	0.81	2.39	1
330	200741	R96827	4.83	2.46	1.96	1.81	2.73	0.50	0.70	4.07	1
331	770837	AA427740	2.08	1.06	1.96	1.26	1.04	3.33	2.02	2.14	1
332	362424	AA018460	2.42	1.24	1.96	0.90	0.78	6.62	0.80	0.68	1
333	771258	AA443849	0.02	0.01	1.95	1.71	4.60	2.40	0.45	0.60	1
334	138474	R34331	2.31	1.19	1.95	1.80	0.96	4.93	1.19	0.88	1
335	795282	AA453997	4.82	2.47	1.95	0.98	0.95	0.85	4.12	2.84	1
336	1602120	AA962236	13.82	7.09	1.95	3.17	1.53	0.94	1.29	2.81	1
337	52303	H23137	0.85	0.43	1.94	3.19	1.76	1.70	1.33	1.37	1
338	365515	AA009609	4.32	2.22	1.94	2.17	1.45	0.41	1.50	4.37	1
339	526567	AA128407	2.02	1.04	1.94	0.86	1.59	3.88	1.38	1.89	1
340	377461	AA055835	9.94	5.12	1.94	2.64	1.96	0.39	1.70	3.02	1
341	413150	AA707872	0.64	0.33	1.94	5.51	1.12	3.47	0.96	1.26	1
342	429148	AA004835	2.19	1.13	1.94	2.21	1.49	2.39	1.52	1.00	1
343	80226	T64216	0.22	0.11	1.94	1.56	3.44	1.27	0.93	1.36	1
344	416833	W86653	4.19	2.17	1.93	3.68	0.57	0.93	0.71	0.81	1
345	132954	R24451	1.74	0.90	1.93	5.07	2.15	1.58	2.82	3.35	1
346	450050	AA703387	8.72	4.52	1.93	0.98	0.93	1.84	0.93	1.63	1
347	548693	AA125925	0.16	0.08	1.93	3.44	1.81	0.09	0.14	2.46	1
348	50877	H18423	34.44	17.84	1.93	4.07	2.89	3.68	1.22	2.18	1
349	449257	AA777700	0.12	0.06	1.93	1.04	1.53	2.55	0.78	1.50	1
350	566106	AA121836	8.66	4.49	1.93	1.76	3.04	1.62	0.91	3.54	1
351	127193	R08266	1.24	0.64	1.93	2.42	1.15	0.59	0.82	0.85	1
352	308829	N91914	3.05	1.58	1.93	6.84	0.52				

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

353	192569	H41489	3.83	1.99	1.93	0.94	0.71	5.07	1.97	0.94	1
354	1468788	AA883735	1.57	0.81	1.93	1.90	1.30	1.58	1.56	3.28	1
355	1573305	AA853973	2.79	1.45	1.92	5.76	0.82	0.58	1.25	1.21	1
356	757285	AA426113	1.80	0.94	1.92	3.51	1.16	2.69	1.40	0.86	1
357	687867	AA235370	1.53	0.80	1.92	3.37	0.94	0.99	2.30	2.04	1
358	878281	AA670288	7.48	3.89	1.92	3.56	0.78	0.41	2.41	2.47	1
359	588362	AA130017	0.09	0.05	1.92	2.33	3.56	1.34	1.36	1.02	1
360	796288	AA460827	0.35	0.18	1.92	3.35	1.77	1.62	1.36	1.51	1
361	859654	AA686418	0.98	0.51	1.92	0.94	0.94	3.12	1.97	2.63	1
362	488301	AA085748	11.69	6.09	1.92	0.85	0.97	1.90	3.51	2.37	1
363	61412	T40905	0.82	0.43	1.92	5.44	1.24	1.01	0.78	1.12	1
364	45877	H08582	1.01	0.53	1.92	2.29	3.06	0.67	1.75	1.81	1
365	841615	AA487465	16.66	8.71	1.91	1.90	1.31	0.42	2.10	3.83	1
366	281072	N50912	12.38	6.47	1.91	3.62	1.55	1.94	1.15	1.30	1
367	306066	N91003	5.76	3.02	1.91	3.01	1.56	1.41	1.15	2.43	1
368	510576	AA055768	176.33	92.35	1.91	3.70	2.54	1.97	0.68	0.65	1
369	431286	AA682627	22.04	11.54	1.91	1.77	2.64	0.76	0.93	3.44	1
370	214809	H74086	1.22	0.64	1.90	2.47	3.82	1.07	0.57	1.59	1
371	269425	N26171	4.45	0.76	1.90	0.71	0.81	6.72	0.80	0.46	1
372	592243	AA156895	4.11	2.17	1.90	3.33	1.64	1.17	1.48	1.87	1
373	1555451	AA975556	2.52	1.33	1.90	1.16	1.16	3.09	2.42	1.65	1
374	292068	N73301	2.84	1.50	1.89	2.02	1.49	3.16	1.31	1.49	1
375	825358	AA504492	2.77	1.46	1.89	4.59	1.00	1.86	0.87	1.14	1
376	453766	AA776434	0.50	0.27	1.89	1.02	1.17	5.41	1.04	0.81	1
377	292633	N68576	0.12	0.07	1.89	1.69	3.23	1.87	1.50	1.16	1
378	46358	H09936	3.08	1.63	1.89	4.90	1.80	0.86	0.87	1.00	1
379	727792	AA393408	1.51	0.80	1.89	5.55	1.18	0.66	0.73	1.30	1
380	727164	AA398922	11.03	5.86	1.88	0.93	1.83	3.74	1.54	1.37	1
381	39933	R53983	0.76	0.40	1.88	1.69	1.16	0.41	0.47	5.67	1
382	290235	N64391	1.51	0.80	1.88	3.06	1.13	1.85	1.44	1.90	1
383	125134	R05416	0.04	0.02	1.88	3.00	1.42	1.28	0.80	2.89	1
384	47630	H11376	0.98	0.52	1.88	0.72	1.23	5.60	1.05	0.78	1
385	511832	AA088517	2.26	1.21	1.87	4.39	2.04	0.91	0.75	1.26	1
386	398045	AA757659	3.28	1.75	1.87	1.72	1.69	3.24	1.02	1.68	1
387	701272	AA286814	0.56	0.30	1.87	3.46	1.60	1.77	1.09	1.44	1
388	195127	R91220	0.92	0.49	1.87	5.34	0.66	0.70	1.07	1.58	1
389	1471841	AA873355	61.64	33.03	1.87	1.00	1.27	5.59	0.92	0.54	1
390	878182	AA775447	22.84	12.25	1.86	2.37	0.63	0.31	3.50	2.52	1
391	307660	N92801	1.88	1.01	1.86	5.12	1.28	0.88	1.12	0.93	1
392	1572196	AA931725	3.38	1.81	1.86	1.18	0.89	4.59	1.52	1.14	1
393	745570	AA626315	4.89	2.63	1.86	3.17	1.07	0.72	1.93	2.41	1
394	202168	H52361	0.02	0.01	1.86	1.16	3.75	0.99	2.02	1.36	1
395	32576	R43535	0.73	0.39	1.85	2.40	0.65	1.54	3.32	1.36	1
396	412949	AA707840	1.72	0.93	1.85	1.70	1.31	3.01	0.97	2.27	1
397	133358	R26859	1.06	0.57	1.85	4.35	1.36	1.58	0.80	1.16	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 1 tumor sample.

398	450598	AA704587	2.36	1.27	1.85	0.78	1.05	5.01	1.16	1.25	1
399	1493252	AA886870	28.41	15.36	1.85	1.91	1.12	0.48	2.54	3.19	1
400	51916	H22563	1.61	0.87	1.85	1.48	1.17	4.17	1.45	0.97	1
401	824573	AA490987	0.21	0.12	1.85	1.40	1.01	1.51	0.91	4.40	1
402	172517	H19826	2.35	1.27	1.85	1.33	1.25	4.54	1.16	0.95	1
403	433287	AA699714	1.19	0.64	1.84	1.02	0.84	4.98	1.52	0.86	1
404	796876	AA463188	2.71	1.47	1.84	3.24	1.50	0.99	2.00	1.48	1
405	321359	W32408	4.64	2.52	1.84	2.16	3.33	1.00	0.88	1.85	1
406	147050	R80217	1.47	0.80	1.84	1.85	0.92	4.60	1.26	0.59	1
407	825648	AA505045	1.03	0.56	1.84	1.88	1.72	3.77	0.80	1.03	1
408	50043	H17696	0.47	0.25	1.84	4.95	1.17	1.02	0.89	1.17	1
409	754601	AA411387	0.85	0.46	1.84	3.56	2.24	0.86	1.22	1.31	1
410	774078	AA441933	1.43	0.78	1.83	0.62	1.21	3.18	1.72	2.44	1
411	1408710	AA868515	0.21	0.11	1.83	0.43	1.10	1.42	4.47	1.73	1
412	1031278	AA609049	2.12	1.16	1.83	2.49	3.79	1.68	0.57	0.63	1
413	51320	H20547	1.30	0.71	1.83	3.52	1.22	1.89	1.67	0.94	1
414	489706	AA099582	2.00	1.09	1.83	1.86	1.26	3.05	1.98	0.98	1
415	363086	AA019482	3.46	1.89	1.83	1.12	1.30	2.12	3.16	1.44	1
416	47169	H10761	0.56	0.31	1.82	3.69	1.96	1.07	1.02	1.38	1
417	153541	R48320	0.06	0.03	1.82	1.10	2.28	4.94	0.80	0.00	1
418	392399	AA707935	0.90	0.49	1.82	1.33	1.40	4.13	1.06	1.19	1
419	489553	AA098896	1.45	0.80	1.82	1.04	1.22	3.33	1.71	1.81	1
420	277848	N47604	3.01	1.66	1.82	1.89	1.05	3.09	1.68	1.37	1
421	878544	AA775863	68.74	37.83	1.82	1.27	1.84	4.14	0.88	0.95	1
422	1476019	AA872454	4.49	2.47	1.82	3.36	1.50	0.66	1.21	2.35	1
423	645259	AA199881	0.17	0.09	1.82	1.15	1.76	3.26	1.38	1.54	1
424	262060	H99075	1.58	0.87	1.81	0.80	1.91	4.97	0.58	0.81	1
425	812244	AA455042	13.83	7.64	1.81	1.59	2.25	3.19	1.01	1.02	1
426	1555427	AA975209	16.82	9.31	1.81	1.64	0.94	2.29	3.04	1.11	1
427	809620	AA458491	0.46	0.26	1.81	0.96	1.26	4.08	1.73	0.99	1
428	611412	AA180204	2.43	1.35	1.80	1.76	0.98	1.99	3.31	0.97	1
429	868838	AA775223	4.62	2.56	1.80	5.26	0.24	0.30	1.21	2.01	1
430	826072	AA521394	1.72	0.95	1.80	2.99	0.98	3.28	0.56	1.20	1
431	1559842	AA976544	27.62	15.33	1.80	0.99	1.43	3.14	2.21	1.24	1
432	200395	R97226	1.08	0.60	1.80	3.20	1.03	1.11	0.73	2.94	1
433	153617	R48833	2.51	1.39	1.80	2.30	1.35	3.59	1.18	0.56	1
434	461727	AA682293	0.70	0.39	1.80	0.59	0.93	0.79	1.28	5.40	1
435	701112	AA287404	9.86	5.49	1.80	3.66	0.77	1.37	1.79	1.39	1
436	1580342	AA969184	0.92	0.51	1.79	1.57	1.16	4.06	1.06	1.09	1
437	46353	H09747	0.80	0.45	1.79	0.96	1.44	1.95	1.05	3.55	1
438	259884	N32804	1.13	0.63	1.79	1.57	1.53	3.63	1.20	1.01	1
439	1031598	AA609474	25.27	14.15	1.79	3.23	1.76	2.16	0.80	0.98	1
440	271662	N35067	33.23	18.60	1.79	1.35	0.92	3.73	1.73	1.20	1
441	51773	H23211	15.09	8.45	1.79	3.48	1.75	0.81	1.17	1.73	1
442	108864	T78909	18.88	10.58	1.78	0.58	1.54	3.49	1.75	1.56	1
						10					

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 1 tumor sample.

443	757873	AA442853	7.87	4.41	1.78	1.42	1.72	1.06	4.23	0.50	1
444	815772	AA485140	2.65	1.49	1.78	2.15	1.90	3.02	0.94	0.89	1
445	786805	AA478479	1.01	0.57	1.78	1.44	4.45	0.80	1.41	0.80	1
446	245330	N54596	1.27	0.72	1.78	3.75	1.39	1.60	1.28	0.89	1
447	731272	AA420983	7.07	3.98	1.78	3.50	0.87	1.30	1.65	1.57	1
448	1609036	AI000502	14.33	8.09	1.77	0.74	1.40	0.84	3.22	2.65	1
449	451511	AA707336	0.68	0.38	1.77	1.20	4.71	1.29	0.89	0.77	1
450	39833	R53455	10.53	5.95	1.77	1.75	1.83	0.21	1.30	3.76	1
451	21984	T66320	2.73	1.54	1.77	1.17	1.91	0.38	1.95	3.43	1
452	121948	T97762	9.91	5.60	1.77	0.47	1.82	1.12	1.02	4.42	1
453	343760	W69271	5.57	3.15	1.77	1.32	1.12	1.43	1.91	3.06	1
454	51103	H19217	0.37	0.21	1.77	1.90	0.85	4.47	0.94	0.65	1
455	281936	N51069	1.68	0.95	1.77	3.44	1.64	1.71	0.80	1.23	1
456	562664	AA086204	1.47	0.83	1.76	1.18	1.98	3.74	0.91	1.01	1
457	248288	N78092	1.45	0.82	1.76	3.05	1.85	1.68	1.22	1.01	1
458	788180	AA453310	118.87	67.49	1.76	2.31	2.20	3.20	0.56	0.53	1
459	449033	AA777394	0.71	0.40	1.76	2.13	1.04	0.83	3.54	1.26	1
460	878231	AA775774	5.16	2.93	1.76	1.47	1.07	3.15	2.46	0.63	1
461	138294	R56854	3.84	2.19	1.76	1.02	1.15	3.32	1.74	1.56	1
462	295843	N68957	4.79	2.73	1.76	0.55	0.61	0.35	1.52	5.76	1
463	786287	AA460849	0.96	0.55	1.76	1.16	0.92	3.68	1.94	1.07	1
464	450612	AA682452	1.00	0.57	1.75	1.15	1.61	4.08	1.37	0.56	1
465	884539	AA629804	0.19	0.11	1.75	1.41	1.45	3.15	1.71	1.05	1
466	504791	AA152347	20.33	11.60	1.75	0.95	1.89	0.27	2.07	3.58	1
467	281442	N47802	4.86	2.77	1.75	1.78	1.18	1.01	3.28	1.52	1
468	325001	W49583	1.56	0.89	1.75	1.28	1.74	4.25	0.81	0.68	1
469	489594	AA089523	2.16	1.23	1.75	3.54	0.90	1.41	1.65	1.26	1
470	417777	W88737	1.97	1.12	1.75	4.98	1.15	0.58	0.80	1.23	1
471	277266	N34395	2.46	1.41	1.75	1.52	1.38	3.06	1.93	0.85	1
472	814341	AA459123	1.84	1.06	1.75	2.31	0.79	2.59	0.72	4.09	1
473	276871	N39426	1.00	0.57	1.75	3.28	0.79	3.61	1.10	0.97	1
474	713129	AA283007	1.69	0.97	1.74	2.26	1.04	0.48	1.14	3.80	1
475	206286	H58702	1.59	0.91	1.74	0.78	1.31	6.00	0.32	0.30	1
476	703577	AA278757	1.58	0.91	1.74	3.59	2.66	0.74	0.92	0.80	1
477	757244	AA426025	14.29	8.20	1.74	1.16	2.01	3.01	0.76	1.17	1
478	646657	AA205413	0.12	0.07	1.74	1.33	1.89	3.01	2.12	1.10	1
479	809719	AA455497	1.56	0.90	1.74	3.53	0.89	0.89	1.83	1.26	1
480	1601852	AA889210	2.60	1.50	1.74	1.45	1.29	1.07	0.50	3.04	1
481	264166	N20482	1.05	0.61	1.73	1.00	2.01	4.19	0.96	0.96	1
482	235909	H52247	0.98	0.57	1.73	1.27	1.15	3.01	1.54	1.70	1
483	809374	AA458569	2.00	1.16	1.73	1.55	1.06	3.80	1.40	0.85	1
484	753907	AA479351	2.46	1.42	1.73	1.13	2.12	3.99	0.71	0.71	1
485	755299	AA496359	1.93	1.12	1.73	0.98	2.29	0.96	3.61	0.81	1
486	878411	AA670356	2.30	1.33	1.73	1.85	0.98	1.37	3.32	1.14	1
487	609935	AA169154	0.09	0.05	1.73	0.66	1.68	1.38	3.49	1.43	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 1 tumor sample.

488	700503	AA291137	4.08	2.37	1.72	1.21	1.27	3.64	1.30	1.19	1
489	898098	AA598796	7.76	4.51	1.72	3.95	1.00	0.84	1.59	1.24	1
490	782576	AA447514	0.52	0.30	1.72	1.06	1.54	0.93	1.86	3.23	1
491	39442	R51617	0.64	0.37	1.72	0.66	0.78	1.74	2.38	3.05	1
492	265668	N25344	2.24	1.30	1.72	1.67	0.93	0.90	1.07	4.02	1
493	277185	N40951	3.91	2.28	1.72	1.84	0.82	3.82	1.26	0.84	1
494	135065	R31413	5.42	3.16	1.71	4.03	2.84	0.90	0.28	0.53	1
495	502527	AA156873	0.07	0.04	1.71	0.71	5.02	0.80	0.64	0.97	1
496	771323	AA476240	3.23	1.89	1.71	1.27	1.12	1.23	3.56	1.43	1
497	322786	W39609	0.73	0.42	1.71	3.09	2.35	1.35	0.77	0.98	1
498	809503	AA454562	1.03	0.60	1.71	0.84	1.06	4.28	1.40	0.97	1
499	713177	AA285053	1.43	0.84	1.71	1.27	1.80	1.15	1.01	3.30	1
500	71312	T47625	2.44	1.43	1.71	3.25	1.32	1.46	1.61	0.89	1
501	51950	H24316	4.32	2.53	1.71	1.19	1.46	1.35	3.23	1.30	1
502	362720	AA018215	0.78	0.46	1.71	1.46	5.09	0.50	0.38	1.10	1
503	123061	R00128	3.22	1.89	1.70	3.97	1.52	1.26	0.71	1.06	1
504	126829	R07184	3.88	2.28	1.70	1.20	1.17	3.25	1.55	1.34	1
505	431482	AA706870	0.72	0.42	1.70	1.78	1.38	3.79	0.91	0.66	1
506	825742	AA504845	1.43	0.84	1.70	4.26	0.88	0.65	1.40	1.31	1
507	731290	AA416827	32.92	19.38	1.70	3.03	0.58	0.58	2.33	1.97	1
508	855236	AA782292	8.41	4.95	1.70	1.82	0.91	3.05	1.34	1.37	1
509	486591	AA042990	5.61	3.30	1.70	3.67	1.23	0.41	0.91	2.27	1
510	1031803	AA609731	3.21	1.89	1.70	4.10	1.36	1.27	1.00	0.75	1
511	743353	AA400317	2.82	1.66	1.70	3.79	0.71	1.43	1.36	1.20	1
512	824723	AA488986	27.00	15.91	1.70	2.63	1.20	0.21	1.25	3.20	1
513	123926	R01515	2.38	1.40	1.70	3.32	1.12	0.48	1.09	2.48	1
514	430720	AA678087	1.00	0.59	1.70	1.46	1.23	3.19	1.03	1.57	1
515	742115	AA405800	2.72	1.61	1.69	1.41	1.16	3.01	1.58	1.30	1
516	126474	R06716	1.73	1.02	1.69	0.67	0.85	1.05	3.34	2.53	1
517	755274	AA496348	2.77	1.84	1.69	1.42	1.77	3.06	1.70	0.49	1
518	345849	W70343	0.63	0.37	1.69	0.68	1.24	3.76	1.43	1.32	1
519	31368	R42738	0.50	0.30	1.69	0.70	0.85	4.90	0.78	1.19	1
520	825822	AA505141	49.12	29.16	1.68	1.13	1.34	0.70	1.57	3.68	1
521	133179	R25403	1.99	1.18	1.68	0.80	0.74	2.03	3.55	1.29	1
522	23819	R39446	4.78	2.85	1.68	0.84	0.82	4.94	0.99	0.80	1
523	448417	AA777555	4.20	2.50	1.68	1.33	0.71	0.44	2.23	3.68	1
524	628336	AA196486	5.05	3.02	1.67	0.72	0.69	5.10	0.96	0.91	1
525	162310	H28091	7.21	4.30	1.67	3.26	0.83	0.44	1.37	2.46	1
526	624271	AA181179	30.10	17.98	1.67	3.11	0.60	1.45	1.80	1.41	1
527	40027	R53943	1.37	0.82	1.67	1.11	1.79	3.38	1.26	0.82	1
528	415851	W86282	2.11	1.26	1.67	0.76	1.71	0.44	1.72	3.73	1
529	363081	AA019335	11.00	6.59	1.67	0.95	0.82	3.41	1.16	2.00	1
530	327799	W23631	0.73	0.44	1.67	0.71	0.73	1.07	5.42	0.42	1
531	546600	AA084517	1.46	0.88	1.67	1.48	1.18	0.93	1.32	3.42	1
532	731311	AA416767	3.46	2.08	1.66	3.15	0.43	0.58	1.91	2.25	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 1 tumor sample.

533	78169	T59658	21.82	13.12	1.66	1.78	0.70	0.24	1.30	4.29	1
534	145491	R77512	3.50	2.10	1.66	0.60	1.02	2.04	3.51	1.15	1
535	814320	AA459110	0.99	0.60	1.66	3.33	2.97	0.50	0.76	0.75	1
536	727028	AA402760	0.67	0.80	1.66	1.15	3.47	1.48	0.96	1.25	1
537	23443	R38678	0.98	0.59	1.66	0.67	1.53	4.56	0.68	0.86	1
538	41648	R52796	0.97	0.58	1.66	0.67	1.35	0.70	1.42	4.16	1
539	1472479	AA872257	44.42	26.77	1.66	1.12	2.02	0.87	0.77	3.52	1
540	245624	N77263	2.31	1.39	1.66	4.29	0.94	0.70	0.71	1.65	1
541	490647	AA115742	3.55	2.14	1.66	1.30	0.67	0.79	2.35	3.17	1
542	769796	AA428034	2.35	1.42	1.66	1.85	0.84	0.89	3.61	1.08	1
543	841308	AA487215	33.63	20.37	1.65	1.20	1.07	0.32	2.14	3.52	1
544	68061	T52840	1.21	0.73	1.65	0.57	3.03	2.59	0.93	1.13	1
545	45391	H08194	1.25	0.76	1.65	0.46	0.58	6.16	0.49	0.56	1
546	810901	AA459293	2.47	1.50	1.65	3.14	1.44	1.40	1.33	0.92	1
547	427996	AA001841	3.41	2.07	1.65	0.36	5.71	1.20	0.46	0.51	1
548	50928	H19327	8.31	5.04	1.65	1.00	2.94	0.81	1.66	3.60	1
549	1035765	AA629117	14.84	9.01	1.65	0.31	1.05	0.94	0.20	3.98	1
550	447404	AA702327	3.35	2.03	1.65	0.91	3.13	1.35	0.77	2.08	1
551	825060	AA489219	0.15	0.09	1.64	4.25	1.26	0.73	0.65	1.33	1
552	137275	R36587	1.57	0.95	1.64	3.97	0.70	1.10	1.62	0.83	1
553	293539	N63727	1.06	0.65	1.64	3.03	1.53	1.15	1.00	1.51	1
554	845380	AA644099	2.39	1.46	1.64	3.08	2.33	0.43	0.87	1.51	1
555	84560	T74023	3.38	2.06	1.64	3.59	0.95	1.76	1.19	0.71	1
556	854633	AA630445	5.81	3.54	1.64	1.23	0.80	3.24	2.04	0.89	1
557	1070062	AA599741	0.30	0.18	1.64	3.21	1.32	1.36	1.00	1.31	1
558	40136	R53951	6.88	4.20	1.64	1.35	3.63	1.30	0.97	0.95	1
559	810358	AA464163	5.37	3.28	1.64	1.10	0.96	2.07	3.30	0.74	1
560	824720	AA488976	2.18	1.33	1.63	2.06	1.17	3.27	0.96	0.70	1
561	244391	N52837	0.78	0.48	1.63	1.12	2.11	3.03	1.01	0.89	1
562	814547	AA480870	0.19	0.12	1.63	1.68	1.76	3.29	0.77	0.65	1
563	840990	AA486669	5.20	3.20	1.63	0.62	1.86	0.51	1.47	3.69	1
564	363055	AA019320	0.57	0.35	1.63	0.83	0.86	4.65	1.18	0.61	1
565	288959	N59808	1.06	0.65	1.63	1.20	1.25	3.35	1.02	1.32	1
566	1048789	AA621332	1.66	1.02	1.63	0.67	3.33	2.52	0.79	0.82	1
567	1240220	AA788970	6.73	4.14	1.62	4.08	0.48	0.87	1.25	1.44	1
568	383528	AA678975	1.85	1.14	1.62	0.93	1.17	3.94	1.10	0.99	1
569	280950	N50843	2.57	1.59	1.62	1.19	1.00	3.43	1.20	1.29	1
570	825669	AA505082	7.82	4.82	1.62	1.18	0.86	3.58	1.40	1.08	1
571	784216	AA448666	0.09	0.05	1.62	2.53	0.97	3.07	0.97	0.56	1
572	435992	AA703219	0.64	0.40	1.62	1.92	1.00	3.47	0.88	1.02	1
573	1636251	AI017240	0.13	0.08	1.61	1.60	1.61	1.30	0.46	3.07	1
574	782446	AA431571	5.45	3.39	1.61	3.30	1.43	0.44	1.11	1.76	1
575	325526	W52355	3.93	2.44	1.61	3.38	1.24	0.85	1.29	1.27	1
576	325111	W47000	1.14	0.71	1.61	1.41	0.95	3.46	1.24	0.98	1
577	109316	T80924	6.43	4.00	1.61	0.54	6.24	0.43	0.48	0.34	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 1 tumor sample.

578	49842	H29268	0.62	0.39	1.60	3.89	1.01	1.05	1.23	0.84	1
579	122684	T99011	0.86	0.53	1.60	3.39	1.35	1.10	1.06	1.11	1
580	826173	AA521431	7.28	4.55	1.60	1.05	0.43	2.21	3.08	1.24	1
581	137940	R63106	3.44	2.15	1.60	1.54	1.28	0.59	0.87	3.71	1
582	137254	R37519	1.20	0.75	1.60	2.11	3.17	1.05	0.99	0.78	1
583	753982	AA478987	2.78	1.74	1.60	4.05	0.62	0.53	1.47	1.32	1
584	265103	N21338	1.74	1.09	1.60	0.64	1.15	3.86	1.46	0.88	1
585	361874	AA001449	11.24	7.03	1.60	1.10	0.47	0.19	4.51	1.71	1
586	267541	N24538	0.82	0.51	1.60	1.29	1.08	3.05	1.30	1.26	1
587	753378	AA411686	9.99	6.26	1.60	1.22	0.78	1.31	1.45	3.23	1
588	73638	T55728	7.12	4.46	1.60	1.04	0.73	0.93	2.13	3.15	1
589	624490	AA187207	2.88	1.81	1.59	1.44	3.29	0.78	1.11	1.35	1
590	377731	AA056232	5.53	3.47	1.59	1.12	1.04	0.30	2.23	3.27	1
591	837891	AA434092	7.51	4.73	1.59	1.30	0.67	3.47	1.70	0.79	1
592	460403	AA677534	2.13	1.34	1.59	0.90	2.31	3.54	0.74	0.43	1
593	364083	AA021628	0.45	0.29	1.58	1.02	1.46	3.18	0.90	1.36	1
594	41569	R52901	1.56	0.99	1.58	0.52	2.82	3.80	0.34	0.43	1
595	131791	R24506	2.77	1.75	1.58	1.16	1.05	3.47	1.44	0.78	1
596	133273	R26960	2.17	1.37	1.58	3.17	0.49	0.44	1.28	2.52	1
597	229365	H74265	0.68	0.43	1.58	3.56	1.35	0.65	1.04	1.30	1
598	784065	AA443832	1.14	0.72	1.58	0.82	1.75	3.68	1.00	0.63	1
599	852548	AA663123	4.72	3.00	1.57	3.51	1.08	1.10	1.19	0.99	1
600	24855	R38952	0.54	0.34	1.57	3.97	1.28	1.00	0.76	0.86	1
601	196387	R91503	0.48	0.30	1.57	3.42	1.24	0.97	1.01	1.23	1
602	825416	AA504265	13.96	8.88	1.57	1.43	0.78	0.22	1.36	4.07	1
603	725745	AA399223	1.75	1.11	1.57	1.05	1.09	1.68	3.26	0.78	1
604	143450	R74478	2.91	1.85	1.57	0.38	1.13	4.39	1.17	0.79	1
605	247660	N58170	0.84	0.54	1.57	3.17	1.63	1.05	0.97	1.04	1
606	811880	AA454634	9.80	6.24	1.57	0.59	1.72	3.42	0.95	1.16	1
607	562395	AA214031	0.74	0.47	1.57	1.36	0.75	3.21	1.07	1.45	1
608	341805	W60845	2.30	1.47	1.57	3.13	0.60	1.03	2.24	0.84	1
609	454771	AA677287	4.72	3.03	1.56	0.87	4.88	0.95	0.75	0.36	1
610	462856	AA705319	0.47	0.30	1.56	3.66	0.85	0.63	0.99	1.68	1
611	280459	N47240	24.12	15.46	1.56	0.60	0.79	3.91	1.26	1.23	1
612	711918	AA282134	0.85	0.55	1.56	3.78	1.50	0.77	0.72	1.03	1
613	825654	AA505051	1.10	0.71	1.56	3.72	1.28	0.86	0.97	0.97	1
614	1049009	AA778653	1.24	0.80	1.56	1.92	0.98	1.06	3.20	0.63	1
615	52079	H23202	4.29	2.75	1.56	1.13	1.04	0.33	1.98	3.31	1
616	25384	R12808	1.08	0.69	1.56	1.18	1.30	3.22	0.99	1.08	1
617	471892	AA035171	6.47	4.16	1.55	1.06	0.67	0.50	2.24	3.29	1
618	24131	R38017	0.43	0.27	1.55	1.05	1.12	3.55	1.01	1.04	1
619	1049230	AA620715	4.19	2.70	1.55	0.12	1.08	1.95	3.79	0.82	1
620	34869	R44447	9.34	6.02	1.55	3.99	0.84	1.20	1.11	0.60	1
621	431505	AA676225	5.83	3.76	1.55	3.52	0.50	0.76	0.84	2.13	1
622	250988	H98557	0.37	0.24	1.55	0.73	0.87	1.27	1.60	3.28	1



Table 2-7: Good vs. Poor Clinical Outcome: Genes Upregulated 3 fold or more in at least 1 tumor sample.

623	897926	AA598809	1.23	0.80	1.55	1.12	1.21	3.23	1.20	0.97	1
624	165828	R86847	1.60	1.04	1.54	0.83	0.95	3.32	1.51	1.10	1
625	824920	AA489016	6.49	4.21	1.54	0.89	0.89	4.06	0.95	0.93	1
626	502674	AA135886	0.75	0.49	1.54	3.14	1.27	0.81	1.27	1.21	1
627	49203	H15695	0.36	0.23	1.54	3.07	0.90	1.13	1.11	1.49	1
628	486208	AA040617	3.32	2.16	1.54	1.12	1.11	0.43	1.73	3.31	1
629	1505692	AA878437	3.30	2.14	1.54	3.80	0.53	0.68	1.47	1.20	1
630	39593	R51912	0.29	0.19	1.54	3.18	1.24	1.10	1.24	0.93	1
631	283142	N51335	8.63	5.62	1.54	1.10	1.01	3.39	1.16	1.01	1
632	767284	AA418414	1.07	0.69	1.53	0.89	1.68	3.19	1.06	0.84	1
633	284247	N52178	116.27	75.80	1.53	0.58	0.72	3.62	1.47	1.28	1
634	298862	N75356	0.85	0.55	1.53	1.21	1.30	3.01	1.37	0.76	1
635	213917	H72959	1.09	0.71	1.53	3.35	1.10	0.88	1.38	0.94	1
636	360478	AA015793	0.51	0.33	1.53	3.19	1.75	0.86	0.87	0.98	1
637	268300	N26724	1.70	1.11	1.53	1.53	0.85	3.27	1.06	0.93	1
638	505225	AA142922	15.46	10.13	1.53	0.93	1.22	0.45	1.18	3.85	1
639	149742	R82733	0.85	0.56	1.52	3.16	1.37	1.12	1.30	0.87	1
640	628295	AA196465	1.15	0.76	1.52	1.26	1.39	3.18	0.86	0.91	1
641	1472743	AA872397	2.35	1.54	1.52	4.69	0.70	0.42	0.86	0.95	1
642	129024	R10378	3.59	2.38	1.52	1.44	4.17	1.25	0.42	0.33	1
643	135800	R33103	0.94	0.62	1.52	3.42	1.03	1.06	1.33	0.77	1
644	435470	AA701502	13.85	9.11	1.52	0.54	3.56	1.37	0.93	1.20	1
645	564803	AA129552	1.34	0.88	1.52	3.72	1.19	1.03	0.77	0.89	1
646	205497	H57857	3.23	2.12	1.52	3.20	0.74	1.43	1.29	0.93	1
647	151201	H02307	3.84	2.53	1.52	3.15	1.25	0.39	1.03	1.77	1
648	713922	AA290737	6.20	4.09	1.52	0.67	1.59	0.38	1.38	3.55	1
649	279481	N48809	37.32	24.63	1.52	0.63	0.80	3.88	1.17	1.10	1
650	53393	R16245	0.78	0.50	1.52	3.22	1.77	1.27	0.56	0.76	1
651	592594	AA159578	12.33	8.15	1.51	0.52	1.42	3.16	1.34	1.12	1
652	81408	T60149	1.81	1.20	1.51	3.37	1.30	0.75	0.68	1.47	1
653	399421	AA733177	4.13	2.73	1.51	0.59	1.21	1.96	0.51	3.30	1
654	324751	AA284113	0.28	0.18	1.51	4.33	0.82	0.67	0.66	1.07	1
655	27769	R40176	0.71	0.47	1.51	4.05	0.93	0.88	0.57	1.13	1
656	84613	T74105	52.58	34.81	1.51	1.64	0.95	0.26	1.24	3.46	1
657	767176	AA424562	3.40	2.25	1.51	0.44	1.82	3.44	0.95	0.90	1
658	307231	N93428	1.17	0.78	1.51	3.61	0.80	0.68	0.70	1.75	1
659	279249	N48580	0.53	0.35	1.51	0.48	0.58	0.71	5.02	0.74	1
660	878277	AA775810	2.65	1.76	1.50	4.08	0.71	0.58	0.94	1.21	1
661	703808	AA278320	2.88	1.92	1.50	0.82	1.39	3.07	0.96	1.27	1
662	80772	T63031	2.20	1.46	1.50	1.10	0.79	3.20	1.61	0.79	1
663	451351	AA707008	1.12	0.75	1.50	0.99	0.94	3.06	1.52	0.98	1
664	325088	W46985	4.80	3.21	1.50	0.69	0.69	3.96	1.49	0.66	1
665	731051	AA421284	0.71	0.47	1.50	0.82	0.99	3.58	1.32	0.78	1
666	320797	W31725	1.79	1.20	1.50	3.40	0.81	0.81	1.20	1.26	1
667	34442	R44985	1.06	0.71	1.50	3.47	1.17	0.76	0.96	1.11	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

668	320392	W16832	4.59	3.07	1.49	0.77	1.01	0.50	0.76	4.43	1
669	897856	AA598817	1.17	0.78	1.49	0.39	6.15	0.29	0.27	0.37	1
670	272529	N35888	1.51	1.01	1.49	0.44	1.05	3.40	1.75	0.82	1
671	417081	W87826	2.45	1.64	1.49	0.55	1.25	3.49	1.35	0.83	1
672	435577	AA703161	16.03	10.74	1.49	0.37	0.58	3.49	1.72	1.30	1
673	814739	AA454928	0.65	0.44	1.49	1.21	1.34	3.53	0.85	0.52	1
674	127120	R08121	1.73	1.16	1.49	0.63	1.31	1.15	3.20	1.17	1
675	1472152	AA873578	2.15	1.44	1.49	0.87	3.64	0.42	0.46	2.06	1
676	503617	AA131406	1.23	0.82	1.49	3.20	1.45	0.52	0.63	1.65	1
677	132636	R26785	10.16	6.83	1.49	0.20	0.95	3.00	2.09	1.19	1
678	270750	N33443	0.78	0.53	1.49	3.51	1.01	0.95	1.07	0.90	1
679	34007	R44544	0.60	0.41	1.49	0.57	1.45	3.09	1.58	0.76	1
680	753162	AA400457	6.76	4.56	1.48	3.68	0.97	0.98	0.93	0.86	1
681	743481	AA609392	1.09	0.73	1.48	3.07	0.93	0.91	1.23	1.27	1
682	384224	AA702077	22.54	15.21	1.48	0.56	0.73	3.04	1.76	1.32	1
683	128165	R12385	1.46	0.98	1.48	1.13	0.92	3.34	1.00	1.01	1
684	150897	H03436	0.50	0.34	1.48	1.51	1.06	0.97	0.68	3.17	1
685	284503	N69528	8.90	6.02	1.48	1.01	0.91	3.63	0.91	0.93	1
686	823663	AA489729	0.74	0.50	1.48	0.77	0.78	1.59	3.23	1.01	1
687	361291	AA017468	1.99	1.35	1.48	0.85	3.02	2.15	0.65	0.72	1
688	1600281	AA962119	1.84	1.25	1.47	0.90	1.05	3.16	1.32	0.94	1
689	435536	AA701900	1.18	0.80	1.47	1.06	1.02	3.27	0.97	1.04	1
690	248117	N58417	0.68	0.46	1.47	3.96	1.49	0.35	0.74	0.81	1
691	451546	AA707400	2.06	1.40	1.47	0.94	0.97	3.63	1.28	0.53	1
692	44975	H08899	9.58	6.52	1.47	1.47	0.84	0.80	0.98	3.25	1
693	257504	N30285	7.47	5.09	1.47	1.24	1.15	0.74	0.95	3.26	1
694	845477	AA644211	0.67	0.46	1.47	1.14	0.79	3.88	0.81	0.71	1
695	430864	AA678203	1.15	0.79	1.46	0.90	0.81	4.22	0.78	0.61	1
696	700571	AA283949	0.86	0.59	1.46	3.49	1.12	0.64	0.73	1.34	1
697	415868	W86214	0.72	0.49	1.46	3.61	0.88	0.87	0.96	0.98	1
698	133150	R26444	1.03	0.70	1.46	3.33	1.45	0.72	1.01	0.80	1
699	50918	H19320	0.57	0.39	1.46	3.07	1.19	1.04	0.86	1.15	1
700	772425	AA405569	0.92	0.63	1.46	3.02	1.05	0.88	1.17	1.16	1
701	789069	AA453085	0.22	0.15	1.46	3.96	1.33	0.51	0.67	0.80	1
702	219888	H84657	34.94	24.04	1.45	0.62	0.65	3.91	0.99	1.09	1
703	109863	T88721	8.23	5.67	1.45	0.69	1.34	0.83	1.00	3.41	1
704	39977	R52526	0.57	0.39	1.45	0.74	1.35	3.33	0.98	0.87	1
705	397432	AA701046	6.82	4.70	1.45	1.12	0.85	3.23	1.32	0.72	1
706	208377	H62839	134.60	92.77	1.45	0.58	0.82	3.73	1.06	1.06	1
707	683278	AA213669	0.80	0.55	1.45	1.39	1.28	3.01	0.85	0.92	1
708	197731	R93591	3.30	2.27	1.45	0.65	0.67	3.93	1.06	0.95	1
709	140174	R66082	1.52	1.05	1.45	0.69	0.69	3.14	2.09	0.64	1
710	668492	AA233070	1.90	1.31	1.45	3.01	1.06	0.89	1.37	0.92	1
711	840686	AA488064	10.78	7.46	1.45	1.06	0.64	3.04	1.72	0.77	1
712	133053	R26206	1.51	1.05	1.45	0.94	1.08	3.87	0.71	0.63	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

713	291426	N67766	4.93	3.41	1.44	0.47	1.10	3.63	1.61	0.41	1
714	1472735	AA872383	104.94	72.70	1.44	0.15	0.49	0.42	2.98	3.19	1
715	814018	AA455659	1.56	1.08	1.44	1.55	0.87	3.03	0.91	0.85	1
716	971367	AA683050	225.26	156.38	1.44	1.18	1.34	3.09	0.81	0.78	1
717	153411	R47979	62.25	43.22	1.44	3.00	0.76	0.13	0.68	2.63	1
718	290162	N63286	0.69	0.48	1.44	3.26	0.93	0.72	1.07	1.22	1
719	418081	W60067	0.32	0.22	1.44	0.86	1.29	0.88	1.00	3.17	1
720	121530	T97890	1.84	1.28	1.44	3.63	1.00	0.64	0.86	1.06	1
721	143759	R76505	2.68	1.87	1.43	0.60	1.25	3.27	1.16	0.87	1
722	489800	AA099820	0.37	0.26	1.43	3.19	0.61	1.05	1.33	0.98	1
723	112482	T80980	10.24	7.16	1.43	1.37	1.38	0.93	0.42	3.05	1
724	1555523	AA974971	1.47	1.03	1.43	0.65	0.90	0.70	0.89	4.02	1
725	24915	R39068	0.64	0.44	1.43	0.63	0.80	4.46	0.81	0.46	1
726	757451	AA437241	1.18	0.83	1.43	3.19	0.90	0.77	0.62	1.64	1
727	239446	H70047	0.71	0.49	1.43	1.14	1.20	0.59	1.17	3.03	1
728	392607	AA708240	41.56	29.18	1.42	0.51	0.67	3.69	1.03	1.22	1
729	744944	AA625890	6.80	4.77	1.42	0.31	1.25	4.80	0.47	0.29	1
730	460218	AA677457	5.16	3.62	1.42	0.74	0.72	3.28	1.18	1.20	1
731	36393	R25823	10.37	7.29	1.42	1.74	1.13	0.53	0.67	3.04	1
732	280528	N47316	12.96	9.12	1.42	5.74	0.66	0.22	0.24	0.24	1
733	252382	H87106	11.19	7.88	1.42	1.40	3.07	0.53	0.60	1.48	1
734	298779	N75318	1.70	1.20	1.42	0.99	0.94	0.22	0.88	0.97	1
735	261851	H99215	1.10	0.78	1.42	3.28	0.92	1.14	0.94	0.81	1
736	32495	R43485	3.20	2.26	1.42	0.72	1.02	1.09	3.22	1.04	1
737	383706	AA704332	14.70	10.38	1.42	0.67	0.81	3.89	0.79	0.93	1
738	853809	AA668470	35.90	25.35	1.42	3.32	0.52	0.33	1.27	1.63	1
739	30275	R42533	0.55	0.39	1.42	4.06	0.83	1.02	0.58	0.58	1
740	452059	AA707121	3.59	2.54	1.41	0.70	0.84	3.38	0.98	1.18	1
741	785975	AA448599	1.30	0.92	1.41	1.31	1.21	0.44	0.65	3.44	1
742	362251	AA001199	4.25	3.02	1.41	0.64	0.71	3.53	1.12	1.05	1
743	713193	AA284634	3.86	2.74	1.41	0.67	0.56	4.15	0.82	0.85	1
744	82734	T73558	6.70	4.75	1.41	1.45	0.53	0.71	1.22	3.13	1
745	814585	AA480906	1.97	1.40	1.41	1.28	1.21	0.26	0.83	0.46	1
746	281737	N51740	3.44	2.44	1.41	1.01	1.01	3.26	0.82	0.82	1
747	208985	H60696	1.50	1.07	1.41	0.79	1.04	3.16	1.12	0.92	1
748	85609	T62040	25.61	18.21	1.41	0.23	3.00	1.72	1.26	0.82	1
749	247446	N58052	3.88	2.76	1.41	0.86	1.01	3.16	1.09	0.91	1
750	126847	R07196	58.28	41.47	1.41	0.56	0.64	0.51	1.25	1.25	1
751	781467	AA432124	2.99	2.13	1.40	3.77	1.63	3.14	0.38	0.73	1
752	451918	AA706964	7.43	5.29	1.40	0.79	0.79	3.29	1.07	1.22	1
753	269563	N24155	14.69	10.48	1.40	0.59	0.65	3.21	1.19	1.29	1
754	814661	AA481052	0.20	0.14	1.40	0.51	0.81	3.21	1.36	1.02	1
755	208165	H62529	4.21	3.01	1.40	0.74	0.90	3.59	0.95	0.82	1
756	221778	H92216	47.45	33.92	1.40	0.54	0.85	3.34	1.14	1.13	1
757	795730	AA460282	0.92	0.66	1.40	1.03	0.92	0.64	3.08	1.32	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

758	144932	R78507	8.62	6.17	1.40	0.75	1.56	3.16	0.71	0.81	1
759	218937	H84759	21.24	15.21	1.40	0.60	0.60	3.27	1.27	1.24	1
760	384134	AA702193	27.27	19.57	1.39	0.63	0.74	3.62	0.84	1.14	1
761	381054	AA054439	0.13	0.09	1.39	0.89	1.39	3.10	0.80	0.78	1
762	898058	AA598775	1.84	1.32	1.39	0.75	0.89	3.47	0.80	1.05	1
763	218861	H81716	48.51	34.84	1.39	0.63	0.75	3.60	0.97	1.01	1
764	208225	H65300	72.84	52.40	1.39	0.49	0.80	3.47	1.08	1.12	1
765	152270	H04757	1.43	1.03	1.39	0.97	1.01	3.24	0.63	1.08	1
766	25396	R17747	0.59	0.42	1.39	3.88	1.18	0.52	0.61	0.75	1
767	431866	AA678361	1.40	1.01	1.38	0.95	0.95	3.07	1.29	0.66	1
768	138255	R56840	2.88	2.08	1.38	0.97	0.84	3.29	0.79	1.03	1
769	123474	R00707	3.34	2.42	1.38	0.49	1.18	0.69	0.50	4.05	1
770	431269	AA682565	1.17	0.85	1.38	0.62	1.10	3.20	0.78	1.21	1
771	309081	N92895	1.76	1.27	1.38	0.45	1.40	4.28	0.39	0.38	1
772	33854	R44837	1.79	1.29	1.38	3.51	0.79	0.24	1.25	1.10	1
773	769857	AA430367	2.79	2.02	1.38	1.10	0.53	1.22	3.57	0.48	1
774	769947	AA430410	1.01	0.73	1.38	0.61	0.83	3.68	0.77	1.00	1
775	34888	R19878	0.71	0.52	1.38	3.81	0.73	0.90	0.68	0.78	1
776	451161	AA704749	0.78	0.57	1.37	0.66	0.92	3.06	0.64	1.58	1
777	230236	H94870	140.80	102.66	1.37	0.57	0.75	3.14	1.30	1.10	1
778	1292829	AA776702	0.13	0.10	1.37	0.85	1.31	0.91	0.11	3.68	1
779	288663	N62394	17.85	13.04	1.37	0.36	3.06	1.63	1.08	0.72	1
780	450680	AA682642	2.29	1.68	1.37	0.48	0.84	3.92	0.93	0.68	1
781	782501	AA431772	0.96	0.70	1.37	0.80	1.03	3.07	1.22	0.71	1
782	141854	R70598	4.52	3.31	1.37	0.83	0.79	3.26	1.09	0.87	1
783	704076	AA279172	18.54	13.58	1.37	0.72	0.82	3.06	0.94	1.28	1
784	1048686	AA620608	2.14	1.57	1.36	3.05	0.86	0.35	0.65	1.90	1
785	809488	AA443116	1.25	0.92	1.36	3.53	0.88	0.82	0.88	0.70	1
786	725364	AA291972	10.64	7.82	1.36	0.26	0.95	3.09	1.77	0.73	1
787	773204	AA425692	35.81	26.33	1.36	0.50	3.17	1.74	0.39	1.00	1
788	813661	AA447764	3.53	2.60	1.36	0.77	3.37	1.13	0.70	0.83	1
789	770879	AA434403	1.86	1.37	1.36	0.64	0.74	0.38	4.06	0.98	1
790	769673	AA428341	3.15	2.32	1.36	1.20	0.77	3.03	1.15	0.84	1
791	221776	H92215	25.91	19.13	1.35	0.50	0.71	3.35	0.93	1.28	1
792	814744	AA454925	33.12	24.47	1.35	0.54	0.78	3.07	1.24	1.14	1
793	688128	AA233549	0.08	0.06	1.35	3.60	1.27	0.57	0.47	0.86	1
794	273048	N36402	2.18	1.61	1.35	1.11	1.06	0.53	0.89	3.18	1
795	223314	H86275	0.17	0.13	1.35	0.69	0.97	3.38	0.31	1.40	1
796	392673	AA708348	69.06	51.24	1.35	0.46	0.64	3.07	1.39	1.18	1
797	1384851	AA857496	0.91	0.67	1.34	0.59	0.86	4.54	0.30	0.43	1
798	35010	R45118	1.56	1.16	1.34	0.43	1.71	3.54	0.57	0.47	1
799	248734	H79078	7.73	5.76	1.34	0.71	0.86	3.19	0.87	1.09	1
800	689367	AA253442	2.00	1.49	1.34	3.41	0.95	0.91	0.60	0.84	1
801	231718	H92875	0.92	0.69	1.34	0.49	0.77	3.16	1.73	0.54	1
802	322857	W44938	0.49	0.37	1.34	0.78	0.83	3.07	0.99	1.01	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 1 tumor sample.

803	480164	AA676920	3.38	2.54	1.33	0.35	0.57	4.83	0.58	0.33	1
804	322136	W37532	105.05	78.95	1.33	0.46	0.52	3.01	1.47	1.20	1
805	823562	AA497111	2.57	1.93	1.33	0.52	3.32	0.34	0.62	1.85	1
806	211387	H68675	35.54	26.74	1.33	0.67	0.61	3.50	0.82	1.05	1
807	48518	H09172	0.70	0.52	1.33	1.04	0.92	0.67	1.00	3.01	1
808	450300	AA682838	6.02	4.55	1.32	0.41	0.60	3.45	1.01	1.14	1
809	431029	AA759470	0.13	0.10	1.32	1.19	1.00	3.26	0.51	0.65	1
810	781492	AA432134	0.51	0.38	1.32	0.85	0.75	0.86	1.02	3.11	1
811	782687	AA447592	0.83	0.63	1.32	0.80	0.68	0.97	3.43	0.70	1
812	767405	AA417921	3.01	2.29	1.31	3.14	0.91	0.45	1.10	0.86	1
813	1472689	AA873159	14.58	11.10	1.31	4.38	0.54	0.51	0.55	0.59	1
814	725224	AA401826	0.84	0.64	1.31	0.42	0.80	3.86	0.82	0.66	1
815	810109	AA464979	1.46	1.12	1.31	1.19	0.70	0.46	0.77	3.43	1
816	825366	AA504505	0.65	0.50	1.31	0.77	0.73	3.04	1.13	0.88	1
817	1558655	AA976561	7.73	5.91	1.31	0.71	0.54	3.63	0.95	0.72	1
818	461363	AA704908	15.65	11.97	1.31	0.56	0.70	3.40	1.05	0.83	1
819	1552618	AA927544	0.45	0.34	1.31	3.13	0.44	0.50	0.97	1.48	1
820	840266	AA485303	14.99	11.49	1.30	0.25	4.33	0.54	0.45	0.95	1
821	454469	AA677337	4.99	3.82	1.30	0.61	0.64	3.16	1.19	0.91	1
822	212473	H69553	13.13	10.08	1.30	0.63	0.70	3.49	0.85	0.84	1
823	80109	T63324	5.71	4.38	1.30	3.68	0.73	0.23	0.76	1.13	1
824	770059	AA427561	1.46	1.12	1.30	0.68	0.56	3.39	1.33	0.55	1
825	123278	R00283	2.86	2.21	1.30	3.04	0.81	0.89	0.73	1.02	1
826	289562	N62763	48.29	37.28	1.30	0.63	0.69	3.01	1.01	1.15	1
827	47481	H11732	2.66	2.06	1.29	3.14	0.93	0.31	0.95	1.13	1
828	435126	AA701328	12.02	9.31	1.29	0.54	0.67	3.25	0.96	1.03	1
829	595148	AA164836	1.19	0.93	1.29	3.76	0.64	0.82	0.62	0.80	1
830	1049030	AA778663	1.11	0.86	1.29	0.78	0.80	3.04	0.99	0.82	1
831	49499	H15549	1.40	1.09	1.28	3.02	1.14	0.67	0.61	0.98	1
832	756554	AA481437	1.47	1.15	1.28	0.63	0.61	3.40	1.18	0.60	1
833	383752	AA704370	4.47	3.49	1.28	0.74	0.62	3.01	1.17	0.97	1
834	645079	AA197334	46.13	35.99	1.28	0.60	0.63	3.00	1.02	1.16	1
835	83541	T69593	0.83	0.65	1.28	0.99	0.69	3.29	0.68	0.75	1
836	703916	AA279060	2.66	2.08	1.27	3.10	1.39	0.21	0.48	1.20	1
837	815835	AA485249	0.26	0.21	1.27	0.51	0.86	3.46	0.68	0.86	1
838	280697	N47443	3.67	2.88	1.27	0.51	1.08	3.77	0.57	0.43	1
839	399264	AA774501	0.40	0.32	1.27	0.50	0.74	3.32	0.91	0.87	1
840	588915	AA157813	12.44	9.82	1.27	3.13	0.66	0.57	0.78	1.20	1
841	140289	R68923	29.64	23.43	1.27	0.61	0.62	3.06	0.88	1.15	1
842	454795	AA677300	2.68	2.13	1.26	0.55	0.77	3.87	0.41	0.69	1
843	756450	AA482127	1.60	1.28	1.26	0.59	0.75	3.30	1.03	0.62	1
844	280982	N50859	2.72	2.16	1.26	0.79	0.58	3.32	0.76	0.85	1
845	295454	N76088	22.29	17.73	1.26	0.68	0.60	3.06	0.87	1.08	1
846	841057	AA486765	1.01	0.80	1.26	0.50	1.34	3.30	0.44	0.70	1
847	246631	N59532	2.15	1.72	1.25	0.62	3.67	0.93	0.36	0.88	1

Table 2-7: Good vs. Poor Clinical Outcome: Genes Upregulated 3 fold or more in at least 1 tumor sample.

848	136026	R34225	5.25	4.19	1.25	3.84	0.92	0.34	0.40	0.76	1
849	824270	AA491261	1.84	1.47	1.25	1.04	0.66	3.03	0.61	0.91	1
850	451596	AA707080	6.37	5.09	1.25	0.41	0.68	3.25	0.94	0.86	1
851	683274	AA213667	2.82	2.25	1.25	0.79	0.60	3.20	1.05	0.60	1
852	223180	H86559	18.89	15.13	1.25	0.56	0.64	3.28	0.88	0.88	1
853	786308	AA451863	2.81	2.25	1.25	3.33	0.84	0.40	0.89	0.76	1
854	196189	R92281	23.31	18.72	1.25	0.52	0.63	0.70	1.34	3.03	1
855	811914	AA454986	4.71	3.79	1.24	1.32	0.89	0.63	0.27	3.12	1
856	815090	AA465194	1.89	1.52	1.24	3.17	0.88	0.71	0.79	0.67	1
857	203350	H54364	1.68	1.35	1.24	3.05	0.96	0.72	0.79	0.68	1
858	361843	AA001444	6.41	5.17	1.24	0.49	1.71	0.29	0.70	3.01	1
859	260168	N32071	0.11	0.09	1.24	0.21	1.44	0.54	0.00	4.02	1
860	1404985	AA845584	0.04	0.03	1.24	0.00	3.16	1.20	1.85	0.00	1
861	773284	AA425298	0.07	0.06	1.24	3.14	1.07	0.17	0.51	1.30	1
862	435953	AA701976	3.57	2.89	1.24	0.40	1.12	3.20	0.73	0.73	1
863	460143	AA676865	3.02	2.45	1.24	0.63	0.80	3.03	0.73	0.98	1
864	52730	H28500	13.72	11.12	1.23	3.10	0.59	0.69	0.61	1.18	1
865	270331	N28457	21.84	17.78	1.23	0.53	0.66	3.14	0.70	1.10	1
866	40636	R55965	5.30	4.32	1.23	0.24	0.74	0.34	0.98	3.83	1
867	148836	H13438	11.57	9.45	1.22	0.67	0.74	3.07	0.82	0.82	1
868	396085	AA757711	4.80	3.92	1.22	0.49	0.74	3.30	0.81	0.78	1
869	435596	AA703159	0.71	0.58	1.22	0.63	0.84	3.01	0.88	0.75	1
870	190692	H38848	6.03	4.94	1.22	0.54	1.01	3.14	0.67	0.74	1
871	825234	AA504132	17.18	14.12	1.22	0.52	0.63	3.28	0.84	0.82	1
872	268455	N21688	37.89	31.16	1.22	0.60	0.66	3.31	0.68	0.83	1
873	1623328	A1015196	8.64	5.54	1.20	1.11	0.99	0.38	0.45	3.05	1
874	136070	R34273	9.69	8.11	1.19	3.12	0.74	0.25	0.52	1.34	1
875	450997	AA704278	3.53	2.96	1.19	0.62	0.64	3.19	0.84	0.68	1
876	433300	AA699719	7.79	6.54	1.19	0.51	0.57	3.05	0.78	1.04	1
877	53158	R16146	1.10	0.95	1.16	3.33	0.63	0.51	0.63	0.69	1
878	814053	AA465495	17.56	15.23	1.15	3.28	0.85	0.32	0.08	1.25	1
879	123755	R01304	4.23	3.68	1.15	0.29	1.11	3.95	0.22	0.20	1
880	46843	H10072	1.44	1.25	1.15	0.44	0.96	3.26	0.65	0.44	1
881	754280	AA479284	15.02	13.05	1.15	3.99	0.73	0.24	0.21	0.58	1
882	745490	AA625979	3.01	2.63	1.15	0.30	1.12	3.29	0.68	0.32	1
883	141361	R64454	1.36	1.20	1.14	3.54	1.05	0.30	0.55	0.23	1
884	80050	T63245	34.68	30.90	1.12	0.22	1.07	3.25	0.55	0.52	1
885	489076	AA057195	0.03	0.02	1.11	0.00	3.69	1.88	0.00	0.00	1
886	504358	AA131885	0.02	0.02	1.10	0.45	3.93	0.37	0.14	0.59	1
887	826985	AA521384	2.31	2.14	1.08	0.77	0.36	0.54	3.02	0.72	1
888	279800	N49107	8.14	7.59	1.07	0.44	0.49	0.20	1.04	3.18	1
889	745347	AA625666	7.22	6.99	1.03	0.73	0.57	0.32	0.45	3.09	1
890	786602	AA478470	10.45	10.12	1.03	3.01	0.68	0.30	0.55	0.62	1
891	306743	N91767	10.70	11.01	0.97	0.77	0.34	0.11	0.62	3.03	1

Table 2-8: Good vs. Poor Clinical Outcome: Genes upregulated 3 fold or more in at least 2 tumor samples.

Table 2-8: Good vs Poor Clinical outcome: Genes upregulated 3 fold or more in at least 2 tumor samples

Order	IMAGE Clone ID	Gen Bank Accession Number	AveGood	AvePoor	Fold(AveGood/AvePoor)	Fold(mpm27/Av ePoor)	Fold(mpm28/Av ePoor)	Fold(mpm29/Av ePoor)	Fold(mpm30/Av ePoor)	Fold(mpm35/Av ePoor)	# of Tumors Samples
1	289679	W05628	2.55	0.50	5.07	7.07	6.80	3.51	0.68	7.30	4
2	811162	AA486471	28.87	8.85	4.21	0.70	3.61	6.33	4.17	6.28	4
3	471641	AA034945	11.03	1.08	10.17	21.19	2.20	4.22	2.10	21.15	3
4	281039	N47717	38.67	4.42	8.29	22.87	1.40	0.27	9.85	7.08	3
5	282089	N48259	27.13	3.45	7.87	22.41	0.41	0.67	7.05	8.80	3
6	155072	R71393	3.32	0.45	7.44	8.50	1.97	1.30	9.52	15.90	3
7	208210	H65286	2.70	0.42	6.48	14.00	1.98	0.98	5.30	10.17	3
8	770066	AA430545	26.72	4.62	5.78	12.05	0.67	1.90	8.30	5.96	3
9	712950	AA282273	38.22	6.94	5.50	8.84	1.04	0.35	4.37	12.92	3
10	81331	T60111	4.13	0.82	5.03	11.18	1.30	0.80	8.59	3.28	3
11	287728	N59158	3.49	0.71	4.90	14.39	0.35	0.46	3.86	5.42	3
12	41228	R58953	0.05	0.01	4.38	9.07	2.53	4.46	2.14	3.71	3
13	122345	T99191	0.03	0.01	4.16	12.66	4.17	0.79	0.00	3.18	3
14	186918	H43317	6.27	1.60	3.93	3.28	1.41	1.33	4.30	9.31	3
15	1049033	AA778675	2.50	0.65	3.87	4.86	2.38	4.54	2.55	5.03	3
16	195365	R88904	1.81	0.50	3.62	6.03	1.45	0.88	3.51	6.23	3
17	50114	H16743	1.48	0.43	3.43	5.36	4.18	4.79	2.28	0.54	3
18	839611	AA458975	87.41	25.99	3.36	5.71	4.22	4.22	1.32	1.35	3
19	283196	N45282	5.16	1.55	3.32	7.31	0.87	1.42	3.24	3.77	3
20	745525	AA626248	4.16	1.27	3.28	5.86	1.71	0.34	4.76	3.74	3
21	159487	H15926	0.12	0.04	2.92	2.50	3.69	3.70	1.59	3.11	3
22	1034473	AA779728	76.12	27.06	2.81	2.22	3.21	1.35	0.78	3.97	3
23	138444	R68272	2.02	0.74	2.75	4.16	1.66	1.35	3.32	3.28	3
24	378488	AA777187	17.01	7.17	2.37	3.23	1.20	0.99	3.13	3.31	3
25	767130	AA424535	4.28	0.37	11.65	1.60	25.69	28.44	1.49	1.02	2
26	307337	N95226	10.81	0.96	11.29	1.65	7.47	44.45	1.65	1.22	2
27	502625	AA134576	7.27	0.90	8.08	1.44	1.15	33.58	1.04	3.17	2
28	41869	R68438	1.41	0.28	5.03	1.46	5.93	15.74	1.30	0.71	2
29	301735	N90882	4.10	0.90	4.56	9.05	2.75	2.93	0.99	7.09	2
30	136605	R35051	32.22	7.39	4.36	2.55	3.53	11.13	1.94	2.65	2
31	362278	AA001219	5.53	1.41	3.91	2.64	2.34	0.78	6.56	7.23	2
32	756708	AA443903	2.58	0.67	3.84	0.50	4.59	10.09	2.98	1.01	2
33	265028	N21084	1.22	0.32	3.78	1.00	4.36	11.96	0.59	0.98	2
34	1408508	AA868929	2.84	0.75	3.78	0.36	5.86	11.75	0.59	0.31	2
35	365707	AA025434	1.94	0.53	3.68	0.58	3.36	10.11	1.36	3.00	2
36	788953	AA424920	3.43	0.94	3.66	0.96	5.41	10.03	0.93	0.97	2
37	357628	W94121	1.80	0.49	3.65	5.62	0.55	0.68	2.00	9.41	2
38	35058	R45192	28.75	7.80	3.64	9.19	4.22	2.07	1.34	1.38	2

Table 2-8: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 2 tumor samples.

39	145740	R77948	30.23	8.55	3.53	1.47	0.52	0.73	5.51	9.44	2
40	757200	AA443967	0.08	0.02	3.51	1.63	2.44	1.32	3.97	8.17	2
41	856575	AA633658	13.79	4.11	3.36	1.01	1.91	2.38	6.90	4.57	2
42	731469	AA412417	3.83	1.14	3.35	3.72	2.54	5.00	2.74	2.75	2
43	140197	R66101	2.60	0.79	3.29	0.86	3.45	10.28	0.99	0.88	2
44	46166	H09076	12.10	3.68	3.29	8.38	1.09	0.51	2.55	3.90	2
45	123264	R00276	8.05	2.46	3.28	0.59	4.91	1.61	1.60	7.68	2
46	37980	R61372	0.83	0.25	3.26	8.99	3.72	2.26	0.96	0.35	2
47	1055707	AA628113	3.79	1.18	3.23	6.07	2.96	1.26	2.50	3.34	2
48	245277	N53447	7.05	2.22	3.18	8.02	1.26	0.59	2.35	3.69	2
49	878596	AA775257	5.91	1.88	3.14	7.62	1.48	0.91	2.42	3.25	2
50	66599	T67128	3.06	0.98	3.12	3.86	0.81	0.45	1.32	9.18	2
51	782335	AA432270	4.04	1.30	3.12	6.21	5.84	1.80	0.66	1.08	2
52	193087	H47076	0.06	0.02	3.11	3.68	0.71	1.77	0.49	8.89	2
53	151477	H02837	2.32	0.75	3.09	10.04	0.89	0.57	3.20	0.75	2
54	768020	AA418748	4.17	1.36	3.06	0.74	4.10	0.74	0.60	9.12	2
55	35329	R45517	1.82	0.64	2.86	3.39	2.99	4.46	1.70	1.75	2
56	245990	N55459	101.29	36.00	2.81	0.45	1.13	0.94	6.81	4.74	2
57	288983	N59816	2.12	0.75	2.81	0.82	1.41	1.52	4.53	5.77	2
58	646037	AA198979	98.80	35.15	2.81	0.92	6.21	3.16	1.58	2.19	2
59	434952	AA700680	1.23	0.45	2.77	1.83	3.75	6.22	0.82	1.24	2
60	231574	H92821	2.29	0.83	2.75	6.94	3.46	1.02	0.85	1.47	2
61	840590	AA487902	48.94	17.94	2.73	4.81	1.98	0.79	1.17	4.89	2
62	78353	T56281	39.72	14.62	2.72	0.58	0.96	1.14	6.48	4.41	2
63	1418621	AA878120	3.31	1.22	2.71	4.87	1.25	1.55	2.55	3.34	2
64	66902	T69477	2.93	1.09	2.68	0.63	4.28	7.31	0.46	0.72	2
65	823655	AA496988	6.96	2.61	2.67	3.01	2.02	4.22	2.85	1.24	2
66	246430	N53031	1.50	0.57	2.63	3.32	0.54	7.85	0.69	0.76	2
67	491751	AA150500	2.62	1.00	2.62	3.79	1.22	1.62	1.56	4.89	2
68	82905	T69305	3.92	1.50	2.62	3.41	2.68	1.71	3.01	2.27	2
69	346583	W74533	3.04	1.17	2.60	5.42	1.46	0.54	2.18	3.42	2
70	298417	N74131	6.38	2.46	2.60	1.63	0.37	0.65	4.00	6.33	2
71	51178	H17121	2.44	0.94	2.59	3.54	1.13	6.17	1.04	1.06	2
72	447416	AA702335	4.21	1.63	2.59	2.51	0.86	5.37	3.15	1.03	2
73	42872	R61883	0.81	0.32	2.55	2.17	1.20	2.58	3.69	3.11	2
74	232772	H72722	39.31	15.73	2.50	0.44	0.93	1.09	5.65	4.38	2
75	277173	N34316	19.49	7.91	2.46	1.63	3.19	5.67	1.21	0.61	2
76	795425	AA453526	1.87	0.77	2.44	0.43	4.91	5.03	1.21	0.63	2
77	743868	AA634431	3.37	1.38	2.44	0.61	3.72	2.12	2.49	3.26	2
78	40100	R54590	1.16	0.48	2.41	3.24	3.10	1.95	1.76	1.99	2
79	202535	H53340	52.42	21.78	2.41	0.31	0.53	0.61	6.54	4.04	2
80	267546	N23139	1.37	0.57	2.41	0.80	3.38	5.61	1.13	1.12	2
81	740604	AA479795	3.61	1.52	2.38	3.47	2.03	1.56	1.58	3.25	2
82	214441	H73590	3.93	1.66	2.37	0.70	3.78	0.22	0.28	6.89	2
83	364022	AA021586	3.15	1.33	2.36	3.36	1.42	0.76	2.42	3.86	2



Table 2-8: Good vs. Poor Clinical Outcome: Genes upregulated 3-fold or more in at least 2 tumor samples.

84	295985	N67039	0.77	0.33	2.32	3.94	1.57	1.42	3.44	1.24	2
85	782575	AA447522	2.41	1.04	2.31	3.32	0.44	0.53	2.96	4.33	2
86	45852	H08862	0.84	0.37	2.30	3.12	1.55	1.05	3.80	1.96	2
87	66560	T67053	15.54	6.85	2.27	4.65	2.10	0.08	0.18	4.34	2
88	284383	N52151	2.85	1.26	2.26	2.81	0.65	0.30	4.10	3.45	2
89	813151	AA456299	1.57	0.70	2.23	4.73	1.49	3.31	0.74	0.90	2
90	813179	AA456321	4.78	2.14	2.23	3.34	0.83	0.42	4.69	1.87	2
91	855745	AA663981	28.11	12.67	2.22	0.76	5.59	0.11	0.24	4.40	2
92	1605539	AA988345	12.27	5.54	2.22	0.56	1.01	0.91	4.70	3.90	2
93	144747	R76247	3.07	1.40	2.20	3.06	0.82	2.15	3.63	1.32	2
94	50772	H16803	37.52	17.15	2.19	3.40	0.78	0.45	0.51	5.80	2
95	214162	H77766	34.05	15.57	2.19	0.17	0.51	0.43	5.78	4.05	2
96	247117	N57872	29.18	13.39	2.18	0.32	0.52	0.59	5.39	4.08	2
97	1468260	AA884926	6.47	2.98	2.17	1.03	4.41	0.25	0.23	4.96	2
98	179083	H50086	0.52	0.24	2.17	3.28	0.97	1.63	1.06	3.89	2
99	770868	AA344487	3.35	1.57	2.14	4.01	3.49	0.97	0.71	1.53	2
100	129585	R16596	22.38	10.50	2.13	0.34	0.49	0.49	5.39	3.95	2
101	324815	W48563	3.60	1.71	2.11	1.59	3.05	3.40	1.60	0.92	2
102	291097	N72137	7.69	3.65	2.11	0.89	1.35	3.00	1.67	3.62	2
103	530814	AA070226	47.09	22.41	2.10	3.61	0.50	0.93	2.03	3.44	2
104	1032405	AA779457	1.81	0.86	2.10	0.76	0.67	1.22	3.46	4.38	2
105	49303	H15677	0.62	0.30	2.09	3.99	0.93	0.64	1.07	3.80	2
106	1031701	AA809586	1.73	0.83	2.07	3.33	1.92	3.02	1.06	1.03	2
107	530185	AA111969	22.57	10.94	2.06	0.84	3.63	1.80	0.44	3.61	2
108	853998	AA668897	19.09	9.27	2.06	3.08	2.55	0.49	0.84	3.34	2
109	378813	AA683520	7.78	3.81	2.04	1.09	3.29	0.41	2.36	3.05	2
110	810899	AA459282	0.02	0.01	2.01	0.56	3.70	1.13	0.40	4.28	2
111	297392	N80129	50.71	25.44	1.99	0.27	0.58	0.52	4.51	4.08	2
112	471682	AA035558	4.12	2.07	1.99	0.76	1.69	0.98	3.19	3.30	2
113	27098	R36989	2.20	1.11	1.98	1.43	1.05	1.23	3.09	3.07	2
114	810873	AA459197	2.96	1.50	1.97	3.13	1.99	0.68	0.93	3.11	2
115	485854	AA040424	1.67	0.85	1.96	1.39	0.93	0.93	3.41	3.16	2
116	283292	N84706	2.97	1.51	1.96	1.40	0.75	0.78	3.03	3.85	2
117	289337	N92646	4.29	2.19	1.96	0.92	3.84	0.37	0.54	4.12	2
118	80948	T70057	15.71	8.31	1.89	1.25	3.02	0.38	0.58	4.24	2
119	836500	AA457528	1.44	0.76	1.89	0.74	0.90	0.85	3.49	3.47	2
120	343987	W70234	28.35	15.04	1.89	0.91	3.19	1.87	0.41	3.05	2
121	258300	N30680	25.74	13.84	1.86	0.55	3.33	4.05	0.75	0.61	2
122	824340	AA489666	5.85	3.24	1.80	0.42	0.66	0.52	3.65	3.76	2
123	884606	AA630006	37.58	21.21	1.77	0.69	1.44	0.21	3.37	3.15	2
124	132702	R27004	48.33	27.34	1.77	0.26	0.56	3.72	3.19	1.11	2
125	767449	AA418000	5.72	3.24	1.76	0.57	3.19	3.89	0.56	0.61	2
126	35804	R46000	1.59	0.94	1.69	0.36	3.18	3.81	0.63	0.49	2
127	1031113	AA609914	0.03	0.02	1.66	0.00	0.53	3.25	4.04	0.48	2

Table 2-9: Good vs. Poor Clinical Outcome: Genes upregulated 5 fold or more in at least 2 tumor samples.

Table 2-9: Good vs Poor Clinical Outcome:  
Genes upregulated 5 fold or more in at least 2  
tumor samples.

Order	IMAGE Clone ID	Gen Bank Accession Number	Tissue Distribution	AveGood	AvePoor	Fold(AveGood/AvePoor)	Fold(mpm27/AvePoor)	Fold(mpm28/AvePoor)	Fold(mpm29/AvePoor)	Fold(mpm30/AvePoor)	Fold(mpm35/AvePoor)	# OF Tumor Samples
1	281039	N47717	bone	38.67	4.42	8.29	22.87	1.40	0.27	9.85	7.08	3
2	282089	N48259	prostate	27.13	3.45	7.87	22.41	0.41	0.87	7.05	8.80	3
3	155072	R71393	-	3.32	0.45	7.44	8.50	1.97	1.30	9.52	15.90	3
4	208210	H83288	testis	2.70	0.42	6.48	14.00	1.88	0.98	5.30	10.17	3
5	770086	AA430545	brain	26.72	4.62	5.78	12.05	0.67	1.90	8.30	5.86	3
6	298679	W05828	bone	2.55	0.50	5.07	7.07	6.80	3.51	0.68	7.30	3
7	767130	AA424535	kidney	4.26	0.37	11.65	1.80	25.69	28.44	1.49	1.02	2
8	307337	N95226	spleen	10.81	0.86	11.29	1.65	7.47	44.45	1.65	1.22	2
9	471641	AA034945	brain	11.03	1.08	10.17	21.19	2.20	4.22	2.10	21.15	2
10	712850	AA282273	l-cell	38.22	6.94	5.50	8.84	1.04	0.35	4.37	12.92	2
11	41869	R66438	adrenal	1.41	0.28	5.03	1.46	5.93	15.74	1.30	0.71	2
12	81331	T60111	-	4.13	0.82	5.03	11.18	1.30	0.80	8.59	3.28	2
13	287728	N59158	-	3.49	0.71	4.90	14.39	0.35	0.46	3.86	5.42	2
14	301735	N90882	esophagus	4.10	0.90	4.56	9.05	2.75	2.93	0.99	7.09	2
15	811162	AA466471	thyroid	28.87	6.85	4.21	0.70	3.61	6.33	4.17	6.26	2
16	382278	AA001219	lymph	5.53	1.41	3.91	2.64	2.34	0.78	6.56	7.23	2
17	1409509	AA888929	bone	2.84	0.75	3.78	0.36	5.88	11.75	0.59	0.31	2
18	768853	AA424920	-	3.43	0.84	3.66	0.96	5.41	10.03	0.93	0.97	2
19	357628	W64121	-	1.80	0.49	3.65	5.62	0.55	0.68	2.00	8.41	2
20	193385	R88904	-	1.81	0.50	3.62	6.03	1.45	0.88	3.51	6.23	2
21	145740	R77948	prostate	30.23	8.55	3.53	1.47	0.52	0.73	5.51	9.44	2
22	782335	AA432270	endothelial	4.04	1.30	3.12	6.21	5.84	1.80	0.66	1.08	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated fold or higher in 3 of 3, 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

Order	IMAGE Clone ID	Gen Bank Accession Number	MPM1(PtEC)	Ave Cancer Cell Lines Values	Fold(AveCell line/MPM1)	Fold(MPM2/M PM1)	Fold(MPM271/M PM1)	# of Cancer Cell Lines	
1	757165	AA443950	0.01	5.71	591.67	7.33	66.37	1701.31	3
2	510631	AA089431	0.01	3.19	319.36	4.57	944.19	9.33	3
3	592707	AA160606	0.01	1.66	234.30	8.10	680.66	14.13	3
4	220851	H95633	0.01	1.28	196.56	8.10	570.75	10.82	3
5	782804	AA448186	0.01	1.81	180.70	8.88	526.08	7.15	3
6	838831	AA481770	0.02	2.58	117.17	3.60	344.82	3.10	3
7	1343732	AA725564	0.01	1.12	112.48	13.45	301.13	22.85	3
8	768226	AA424900	0.01	1.04	103.67	3.09	302.09	5.84	3
9	731048	AA421275	0.01	0.99	99.19	3.74	290.43	3.41	3
10	366039	AA071503	0.03	2.66	86.03	5.01	249.63	3.45	3
11	795627	AA459917	0.01	0.51	85.17	3.09	239.88	12.54	3
12	1161830	AA876021	0.01	0.71	71.26	3.19	203.18	7.41	3
13	731371	AA421047	0.03	2.20	71.17	3.28	205.85	4.38	3
14	784296	AA447079	0.01	0.66	65.30	45.84	106.60	43.45	3
15	796569	AA460463	0.01	0.35	63.57	16.10	138.91	35.70	3
16	346942	W94289	0.01	0.61	61.20	3.73	168.10	11.76	3
17	795658	AA461522	0.03	1.60	60.34	6.29	170.43	4.30	3
18	131452	R23270	0.45	26.93	59.79	104.24	4.69	70.45	3
19	1558655	AA976561	0.08	4.36	54.32	97.06	17.92	47.97	3
20	743016	AA406036	0.01	0.50	50.47	15.70	123.80	11.93	3
21	39442	R51617	0.10	5.02	49.93	99.52	44.77	5.49	3
22	33076	R44048	0.80	36.21	45.35	56.36	29.19	50.51	3
23	626390	AA189106	0.07	3.16	45.16	91.62	20.97	22.90	3
24	128083	R09747	0.01	0.44	44.34	25.03	101.07	6.93	3
25	1389018	AA855158	0.02	0.81	43.48	3.54	120.65	6.23	3
26	28498	R37395	0.01	0.43	43.37	5.62	121.33	3.16	3
27	757368	AA437126	0.01	0.42	41.72	4.59	109.53	11.05	3
28	813633	AA447740	0.04	1.68	41.51	3.55	116.08	4.92	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

29	1367900	AA810225	0.01	0.41	41.11	4.81	99.20	19.33	3
30	366209	AA062985	0.01	0.38	38.18	3.08	106.34	5.11	3
31	812170	AA456035	0.01	0.30	37.18	16.25	80.79	14.51	3
32	50288	H17888	0.01	0.32	36.79	12.25	87.45	10.68	3
33	243181	H94482	0.01	0.36	35.62	5.91	88.28	12.68	3
34	256911	N30098	0.01	0.25	34.44	20.19	73.72	9.41	3
35	1030813	AA608832	0.01	0.33	33.18	5.81	82.72	11.01	3
36	487861	AA045436	0.02	0.59	32.57	29.44	39.44	28.82	3
37	270626	N33331	0.01	0.32	31.52	8.48	9.21	76.87	3
38	291057	N72115	0.23	6.85	29.19	24.48	38.30	24.80	3
39	1455835	AA863292	0.01	0.40	29.16	9.10	30.24	48.14	3
40	108378	T77729	0.01	0.41	29.13	7.73	36.47	43.19	3
41	1391682	AA789328	0.02	0.44	28.83	5.99	65.78	14.72	3
42	263014	H99813	0.63	17.34	27.31	19.07	21.59	41.29	3
43	303180	N92764	0.01	0.27	27.21	13.82	36.04	31.77	3
44	42415	R60981	0.12	3.11	26.71	9.46	65.35	5.30	3
45	768056	AA418903	0.01	0.16	26.24	7.36	35.03	36.33	3
46	46896	H09818	0.05	1.21	25.96	33.86	30.16	13.87	3
47	151184	H02294	0.48	12.53	25.93	38.89	13.26	25.64	3
48	38344	R49555	0.01	0.24	25.84	5.18	58.23	14.11	3
49	787856	AA452139	0.01	0.29	25.59	4.23	62.71	9.84	3
50	41595	R59556	0.01	0.17	25.59	12.08	52.20	12.48	3
51	430255	AA010383	0.01	0.25	25.24	4.46	54.64	16.63	3
52	687972	AA236986	0.01	0.17	25.09	3.61	60.05	11.62	3
53	430092	AA009840	0.40	10.00	24.80	34.18	13.61	26.60	3
54	1049033	AA776675	0.38	9.30	24.51	46.38	16.26	10.88	3
55	884790	AA629838	0.01	0.24	24.29	30.26	10.09	32.50	3
56	23345	R39191	0.01	0.16	23.97	44.37	17.55	9.98	3
57	29585	R42112	0.04	0.84	23.75	8.09	59.71	3.48	3
58	284714	N63057	0.01	0.16	23.01	8.11	34.50	26.43	3
59	855910	AA630328	0.01	0.16	22.37	4.98	30.37	31.76	3
60	34204	R44936	0.17	3.74	22.30	3.82	51.95	11.14	3
61	365149	AA025142	0.16	3.52	22.24	38.20	16.96	11.55	3
62	79000	T61938	1.90	40.77	21.44	37.52	23.72	3.08	3
63	43065	R61866	0.05	0.97	21.43	4.47	56.01	3.81	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

64	259884	N32904	0.91	19.16	20.97	4.40	10.88	47.62	3
65	418094	W90036	0.01	0.21	20.90	5.07	7.89	49.72	3
66	51581	H22824	0.01	0.25	20.42	18.18	18.45	24.62	3
67	270975	N32542	0.01	0.20	20.40	5.36	33.42	22.42	3
68	51916	H22563	0.12	2.46	20.27	20.94	30.57	9.30	3
69	40010	R54036	0.01	0.19	19.50	7.04	11.18	40.27	3
70	39722	R54492	0.01	0.17	18.85	3.39	10.12	43.06	3
71	1467161	AA883187	0.02	0.31	18.24	10.20	24.35	20.16	3
72	489076	AA057195	0.02	0.35	18.01	4.49	38.83	10.71	3
73	488431	AA047441	0.17	2.95	17.83	10.45	28.90	14.13	3
74	435099	AA701315	0.01	0.21	17.36	7.52	33.82	10.73	3
75	67440	T49355	1.96	33.78	17.25	25.95	8.91	16.88	3
76	1031568	AA609304	0.05	0.86	17.19	4.26	42.11	5.21	3
77	280155	N47012	0.04	0.63	17.15	5.64	11.78	34.04	3
78	627521	AA192784	0.04	0.69	16.92	4.19	42.48	4.08	3
79	454083	AA676998	0.01	0.17	16.89	8.16	10.67	31.84	3
80	347586	W81432	0.01	0.17	16.56	7.84	8.92	32.94	3
81	269606	N26769	0.01	0.21	16.54	6.72	36.98	5.91	3
82	358990	W92263	0.01	0.16	16.35	10.47	5.09	33.48	3
83	235164	H79466	0.01	0.09	16.34	9.38	30.25	9.40	3
84	357373	W93717	0.70	11.31	16.17	5.81	15.89	26.82	3
85	238689	H81554	0.07	1.17	15.96	3.05	41.27	3.54	3
86	82869	T69270	0.02	0.32	15.94	21.48	14.07	12.25	3
87	753411	AA410437	0.03	0.40	15.85	3.94	36.93	6.69	3
88	767315	AA418545	0.02	0.29	15.63	6.61	33.79	6.49	3
89	487766	AA045175	0.02	0.30	15.57	4.69	22.78	19.22	3
90	742698	AA401378	0.05	0.71	15.34	3.35	39.06	3.61	3
91	447416	AA702335	0.25	3.80	15.00	33.97	5.66	5.36	3
92	250069	H97140	0.02	0.35	14.92	5.14	24.61	15.00	3
93	743030	AA406061	0.05	0.70	14.84	3.83	37.53	3.17	3
94	28298	R40434	0.02	0.35	14.61	5.11	16.46	22.27	3
95	757389	AA437142	0.01	0.14	14.54	5.64	32.86	5.13	3
96	785293	AA476543	0.11	1.64	14.41	24.69	3.02	15.54	3
97	1461609	AA883800	0.25	3.51	14.24	10.07	4.19	28.45	3
98	25915	R39951	0.01	0.14	14.20	9.65	6.51	26.44	3

**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

99	1031446	AA609189	0.04	0.50	14.14	5.44	31.74	5.25	3
100	32109	R42780	0.09	1.25	14.14	31.21	5.86	5.35	3
101	856289	AA774665	1.24	17.58	14.13	5.00	9.24	28.16	3
102	30850	R42600	0.03	0.39	13.78	6.39	29.82	5.12	3
103	41406	R56149	0.01	0.13	13.76	17.85	18.97	4.48	3
104	1035796	AA628867	1.14	15.63	13.71	10.64	9.76	20.74	3
105	898286	AA598974	1.21	16.52	13.65	13.47	11.86	15.62	3
106	502003	AA128617	0.01	0.17	13.58	7.33	15.99	17.41	3
107	359269	AA016225	0.01	0.13	13.43	9.24	8.92	22.12	3
108	415089	W93379	0.65	8.63	13.24	8.23	12.04	19.45	3
109	1466409	AA885478	0.14	1.91	13.23	22.16	9.42	8.12	3
110	824074	AA491227	0.02	0.26	13.22	3.39	18.08	18.18	3
111	51103	H19217	0.02	0.23	13.14	14.72	17.85	6.86	3
112	1467166	AA883181	0.08	1.05	13.14	3.08	29.16	7.18	3
113	244050	N34042	0.01	0.17	12.88	5.65	21.72	11.26	3
114	1055121	AA621355	0.02	0.25	12.67	6.31	28.51	3.21	3
115	897807	AA598531	0.29	3.56	12.37	21.95	7.81	7.37	3
116	845441	AA644550	0.01	0.12	12.30	5.26	7.58	24.06	3
117	686172	AA262211	1.18	14.39	12.18	5.65	13.80	17.09	3
118	1049079	AA778717	0.03	0.31	12.10	3.28	15.47	17.55	3
119	785368	AA476576	1.38	16.58	12.06	8.77	4.23	23.17	3
120	451649	AA706901	1.40	16.82	11.98	4.34	18.70	12.88	3
121	48461	H09840	0.33	3.89	11.80	3.09	13.18	19.11	3
122	1030798	AA609002	0.03	0.31	11.73	10.15	8.33	16.72	3
123	33839	R44816	0.96	11.24	11.67	3.60	19.31	12.09	3
124	357138	W93523	0.02	0.20	11.63	10.87	20.61	3.40	3
125	366971	AA026682	2.38	27.64	11.61	3.65	10.18	20.99	3
126	609228	AA179161	0.01	0.11	11.46	4.58	5.70	24.11	3
127	210820	H67712	0.04	0.45	11.30	5.06	7.88	20.94	3
128	795746	AA460299	0.52	5.68	10.87	17.77	9.89	4.94	3
129	795840	AA461513	0.01	0.06	10.81	4.64	15.78	12.02	3
130	788209	AA453433	0.01	0.09	10.70	11.07	8.10	12.92	3
131	767403	AA417920	0.56	5.93	10.66	4.43	22.31	5.22	3
132	204483	H58234	1.27	13.51	10.64	11.48	13.18	7.26	3
133	814769	AA454949	1.16	12.13	10.45	21.90	4.33	5.14	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

134	430928	AA678295	0.74	7.64	10.34	20.21	5.77	5.03	3
135	745019	AA626028	0.01	0.10	10.24	3.65	22.27	4.82	3
136	725308	AA291556	0.02	0.18	10.15	3.39	4.07	22.97	3
137	898073	AA598787	0.04	0.37	10.00	3.74	20.48	5.78	3
138	745480	AA625979	0.11	1.05	9.95	12.71	3.07	14.06	3
139	34134	R44734	0.51	5.07	9.92	21.35	3.47	4.93	3
140	391987	A1003636	0.06	0.57	9.79	3.40	8.94	16.03	3
141	376452	AA041197	0.03	0.32	9.78	5.69	8.56	15.10	3
142	431242	AA682533	1.26	12.26	9.74	3.45	18.90	6.87	3
143	590500	AA157261	0.02	0.17	9.64	4.99	9.81	14.13	3
144	590727	AA156342	0.01	0.10	9.62	3.83	6.58	18.44	3
145	433567	AA701652	0.02	0.16	9.57	11.04	10.28	7.37	3
146	273546	N33274	3.29	31.33	9.53	4.57	20.10	3.91	3
147	280375	N47113	1.12	10.61	9.52	11.98	10.79	5.79	3
148	303099	N90779	0.15	1.40	9.48	5.53	11.42	11.50	3
149	448059	AA702684	0.22	2.04	9.46	6.47	14.40	7.50	3
150	269300	N24042	1.12	10.53	9.44	5.48	13.22	9.62	3
151	430973	AA678348	0.76	7.14	9.41	3.48	5.97	18.79	3
152	645565	AA204830	0.62	5.85	9.41	4.56	7.97	15.70	3
153	346552	W74377	0.02	0.19	9.32	3.79	15.51	8.67	3
154	489213	AA045665	0.37	3.43	9.32	9.36	11.24	7.35	3
155	43733	H04789	0.11	1.03	9.24	10.06	12.44	5.24	3
156	461488	AA705047	0.10	0.97	9.22	12.49	10.86	4.33	3
157	781047	AA446462	1.08	9.89	9.17	4.58	11.63	11.30	3
158	234617	H77727	0.07	0.60	9.16	12.99	8.66	5.84	3
159	46694	H10192	0.35	3.21	9.15	8.17	14.83	4.46	3
160	177884	H46176	0.16	1.44	9.15	5.38	8.45	13.62	3
161	897956	AA598817	0.15	1.40	9.13	13.21	8.47	5.71	3
162	141726	R69584	0.03	0.26	9.09	3.46	10.73	13.08	3
163	324901	W49672	0.01	0.11	8.92	7.38	12.47	6.90	3
164	78217	T50699	0.01	0.05	8.82	9.14	7.21	10.11	3
165	624627	AA187351	0.56	4.90	8.72	5.30	9.17	11.70	3
166	491184	AA137072	1.49	12.90	8.67	6.69	13.78	5.53	3
167	242952	H95638	5.65	48.92	8.66	3.86	6.65	15.48	3
168	826273	AA520999	0.45	3.90	8.62	5.02	10.99	9.84	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

169	71977	T52311	0.02	0.14	8.51	7.42	14.21	3.90	3
170	840150	AA485265	0.02	0.19	8.35	4.95	13.73	6.37	3
171	809557	AA455786	0.53	4.39	8.32	3.89	6.65	14.40	3
172	42906	R60019	0.19	1.57	8.31	9.78	8.33	6.83	3
173	344134	W73790	0.01	0.08	8.30	4.16	16.37	4.37	3
174	773383	AA425755	0.94	7.83	8.30	5.27	11.10	8.51	3
175	358599	W96216	0.03	0.25	8.13	3.04	13.64	7.71	3
176	30148	R41329	2.63	21.34	8.13	4.35	5.10	14.93	3
177	203275	H54752	1.29	10.44	8.09	5.06	3.98	15.23	3
178	80399	T65902	7.67	61.74	8.05	4.69	4.12	15.35	3
179	1292182	AA705825	0.03	0.28	8.02	3.42	7.53	13.11	3
180	52741	H29521	0.70	5.63	8.01	3.96	15.49	4.58	3
181	813271	AA455938	0.07	0.54	7.87	11.86	6.62	5.12	3
182	190325	H29897	0.37	2.89	7.77	4.86	11.97	6.49	3
183	745393	AA625764	0.08	0.60	7.77	3.94	9.24	10.12	3
184	782259	AA431741	0.75	5.81	7.75	11.54	7.24	4.46	3
185	1505919	AA906257	0.05	0.35	7.72	4.23	8.93	10.00	3
186	121251	T98718	3.19	24.59	7.70	7.55	4.17	11.39	3
187	73596	T55607	1.74	13.42	7.70	4.60	7.66	10.84	3
188	322461	W15305	0.22	1.68	7.70	6.23	3.58	13.28	3
189	882510	AA676460	34.04	261.61	7.68	3.35	8.00	11.71	3
190	200402	R96941	0.75	5.69	7.61	8.56	5.22	9.05	3
191	950690	AA608568	0.73	5.53	7.61	7.77	7.09	7.97	3
192	260035	N30372	0.02	0.15	7.55	6.04	5.10	11.50	3
193	530820	AA070331	0.01	0.04	7.55	10.53	4.96	7.15	3
194	770879	AA434403	0.75	5.64	7.53	3.47	10.88	8.23	3
195	83666	T61122	0.03	0.20	7.44	12.64	4.41	5.28	3
196	435076	AA701455	2.95	21.88	7.41	10.35	6.94	4.93	3
197	309288	N93924	3.23	23.90	7.39	5.03	4.68	12.46	3
198	843163	AA488367	7.80	57.27	7.34	3.00	6.84	12.18	3
199	52704	H29227	0.53	3.90	7.31	7.30	6.65	7.97	3
200	740620	AA477400	0.02	0.12	7.30	6.01	6.44	9.46	3
201	294273	N70714	0.52	3.80	7.28	3.23	4.60	14.01	3
202	50787	H16833	0.06	0.41	7.24	3.25	13.99	4.48	3
203	85670	T62072	0.80	5.80	7.23	4.11	7.03	10.54	3



Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

204	251936	H97488	4.68	33.83	7.22	4.39	11.90	5.38	3
205	796114	AA460952	0.84	6.75	7.20	3.01	9.60	8.99	3
206	853368	AA663310	2.51	18.03	7.18	5.15	7.63	8.78	3
207	809567	AA456611	0.01	0.10	7.15	4.40	6.35	10.69	3
208	283173	N45236	2.09	14.78	7.08	11.72	5.87	3.65	3
209	126650	R06944	0.43	3.05	7.05	5.35	7.83	7.98	3
210	143365	R74203	0.01	0.08	7.03	4.65	9.95	6.50	3
211	1637343	A1015359	14.33	100.32	7.00	4.74	7.07	9.20	3
212	415906	W86196	0.06	0.44	6.96	3.01	6.52	11.35	3
213	40773	R56046	0.06	0.39	6.93	6.40	11.26	3.14	3
214	264502	N20305	0.53	3.69	6.92	6.49	4.41	9.86	3
215	345525	W72437	3.93	27.15	6.92	13.48	3.38	3.89	3
216	814225	AA465238	1.08	7.46	6.92	4.76	10.31	5.69	3
217	433576	AA701645	0.10	0.72	6.85	10.00	5.36	5.19	3
218	246659	N57722	0.37	2.56	6.83	3.47	4.92	12.11	3
219	131316	R23055	1.19	8.14	6.82	3.20	5.03	12.23	3
220	681906	AA256231	0.01	0.08	6.79	4.75	10.24	5.38	3
221	214604	H71230	0.05	0.34	6.79	9.29	4.78	6.30	3
222	46091	H08595	1.32	8.93	6.79	6.37	9.34	4.64	3
223	359119	AA010065	4.09	27.70	6.77	5.57	3.78	10.97	3
224	51083	H17139	0.04	0.30	6.72	7.84	4.68	7.65	3
225	1031885	AA609723	0.54	3.61	6.72	8.02	8.01	4.14	3
226	134719	R28287	0.31	2.07	6.69	9.45	5.02	5.60	3
227	814246	AA465593	9.85	65.62	6.66	3.37	9.66	6.95	3
228	950445	AA599092	2.82	18.79	6.65	7.13	4.39	8.44	3
229	813149	AA456695	0.70	4.67	6.65	7.85	4.47	7.62	3
230	204214	H59203	0.68	4.52	6.64	8.09	3.71	8.12	3
231	1488597	AA884622	0.01	0.07	6.59	7.52	7.44	4.80	3
232	725454	AA397813	5.43	35.52	6.54	3.80	3.32	12.51	3
233	43662	H05645	0.06	0.42	6.54	10.89	5.69	3.05	3
234	51460	H20847	1.12	7.31	6.53	5.27	9.69	4.63	3
235	281733	N48075	0.41	2.64	6.52	4.93	8.97	5.67	3
236	50383	H17869	3.43	22.29	6.50	4.19	4.30	11.00	3
237	160233	H21943	1.30	8.44	6.48	4.26	5.16	10.01	3
238	487297	AA045508	1.13	7.26	6.45	3.07	8.32	7.97	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

239	430007	AA034115	0.26	1.70	6.43	4.03	5.78	9.48	3
240	395955	AA757564	0.13	0.82	6.41	5.00	4.97	9.25	3
241	782476	AA431753	0.76	4.82	6.38	8.52	6.40	4.22	3
242	343298	W68162	0.10	0.62	6.37	10.68	3.55	4.86	3
243	151055	H02231	7.49	47.65	6.36	6.67	5.78	6.63	3
244	280907	N50827	0.07	0.47	6.32	3.73	12.06	3.15	3
245	32050	R41972	0.44	2.79	6.31	4.19	3.05	11.67	3
246	782594	AA447531	0.01	0.04	6.30	3.56	10.41	4.91	3
247	282936	N63744	0.72	4.53	6.29	3.26	6.93	8.69	3
248	130004	R11605	0.38	2.35	6.25	3.19	5.05	10.52	3
249	22895	R38640	0.02	0.15	6.24	3.63	10.49	4.60	3
250	249603	H84871	5.09	31.76	6.24	11.55	3.15	4.01	3
251	786694	AA460685	6.55	40.75	6.23	4.27	10.33	4.07	3
252	813586	AA447662	1.97	12.17	6.19	4.19	5.59	8.79	3
253	137890	R68581	0.76	4.70	6.17	4.68	3.86	9.96	3
254	128947	R10284	1.20	7.33	6.13	6.92	5.67	5.79	3
255	50983	H18017	0.02	0.14	6.12	7.62	5.90	4.83	3
256	742115	AA405800	0.57	3.47	6.11	9.63	4.21	4.48	3
257	773073	AA425302	2.73	16.66	6.10	7.47	5.73	5.08	3
258	256680	H96392	0.81	4.93	6.06	3.55	6.77	7.86	3
259	489805	AA102068	0.01	0.08	6.06	6.43	4.55	7.19	3
260	814306	AA459318	4.89	29.59	6.05	6.00	6.93	5.21	3
261	773147	AA425404	1.31	7.89	6.04	4.66	8.09	5.37	3
262	951068	AA620437	0.16	0.94	6.02	9.62	3.03	5.40	3
263	275871	R93875	0.01	0.07	5.99	5.03	7.41	5.52	3
264	271076	N29918	0.54	3.18	5.90	7.03	3.15	7.53	3
265	301104	N81049	0.24	1.38	5.88	9.69	3.97	3.97	3
266	813827	AA453714	0.02	0.10	5.87	3.43	4.55	9.64	3
267	46154	H09065	0.01	0.06	5.87	3.67	4.93	9.01	3
268	489594	AA099523	0.37	2.15	5.86	4.97	9.49	3.11	3
269	357531	W94009	1.37	8.00	5.86	4.55	5.43	7.60	3
270	44255	H06113	2.22	12.98	5.83	3.46	4.46	9.58	3
271	809535	AA454585	7.47	43.39	5.81	3.50	5.22	8.71	3
272	41198	R56870	2.45	14.21	5.81	3.49	4.78	9.15	3
273	287637	N59136	1.87	10.85	5.80	4.53	5.30	7.58	3

**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

274	745360	AA625662	5.55	32.21	5.80	3.92	7.27	6.22	3
275	74738	T57359	2.36	13.63	5.78	3.39	5.86	8.09	3
276	147385	H01332	0.03	0.16	5.76	4.97	6.03	6.29	3
277	884822	AA669341	41.24	237.42	5.76	3.75	3.12	10.40	3
278	795749	AA460310	0.62	3.53	5.72	10.19	3.61	3.34	3
279	504826	AA150777	0.83	4.73	5.69	6.56	5.66	4.86	3
280	147828	R81486	0.92	5.22	5.68	8.14	3.99	4.93	3
281	667598	AA228130	0.90	5.08	5.66	3.60	5.70	7.68	3
282	884799	AA628849	2.81	15.89	5.65	4.60	4.10	8.24	3
283	45882	H08785	0.34	1.94	5.63	5.49	5.63	5.77	3
284	705064	AA278990	1.55	8.72	5.63	3.52	4.25	8.11	3
285	146882	R80790	4.49	25.20	5.62	6.88	4.48	5.48	3
286	399562	AA733061	1.43	8.04	5.61	3.30	3.47	10.06	3
287	220700	H93424	0.86	5.38	5.61	5.49	4.88	6.45	3
288	132708	R25614	0.45	2.53	5.59	9.91	3.75	3.10	3
289	51465	H23983	0.07	0.40	5.54	4.68	6.93	5.02	3
290	85384	T71865	4.40	24.34	5.54	8.15	3.92	4.54	3
291	491615	AA115559	0.93	5.08	5.49	3.62	6.29	6.56	3
292	264146	N20593	0.51	2.80	5.45	3.31	9.67	3.38	3
293	32299	R42685	1.58	8.62	5.45	4.98	3.50	7.85	3
294	361069	AA017213	0.06	0.31	5.44	3.64	5.09	7.59	3
295	898097	AA598803	1.04	5.65	5.42	6.63	5.49	4.14	3
296	459947	AA779383	0.30	1.59	5.37	4.66	5.58	5.87	3
297	789204	AA450205	2.16	11.60	5.37	5.05	3.79	7.27	3
298	431245	AA682545	1.90	10.19	5.37	3.91	5.22	6.98	3
299	460114	AA676840	0.10	0.55	5.34	3.39	7.08	5.55	3
300	357285	W93682	0.18	0.94	5.33	3.66	6.07	6.26	3
301	951125	AA620556	6.73	35.80	5.32	4.34	5.23	6.39	3
302	279752	N49079	1.26	6.70	5.32	3.21	3.61	9.14	3
303	261714	H98822	2.57	13.64	5.30	6.09	5.91	3.90	3
304	26297	R20628	0.02	0.10	5.24	6.79	4.32	4.61	3
305	180841	R87758	0.17	0.91	5.24	8.25	3.79	3.67	3
306	363103	AA018511	0.69	3.59	5.21	7.86	4.68	3.08	3
307	40299	R52085	0.02	0.12	5.20	5.19	5.01	5.40	3
308	840506	AA485898	16.19	83.75	5.17	4.37	3.47	7.68	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

309	490060	AA136060	0.48	2.47	5.16	3.25	5.27	6.97	3
310	447208	AA703000	1.01	5.19	5.15	4.99	5.00	5.45	3
311	278483	N68132	6.20	31.82	5.13	4.34	5.12	5.93	3
312	147147	R80387	0.08	0.40	5.12	6.39	4.23	4.75	3
313	855390	AA663995	0.05	0.24	5.12	3.45	3.76	8.15	3
314	789182	AA450265	6.64	34.01	5.12	7.16	3.23	4.97	3
315	50649	H18068	0.56	2.84	5.11	3.62	7.05	4.67	3
316	1500388	AA885851	0.15	0.77	5.09	4.62	5.03	5.63	3
317	810284	AA463924	2.14	10.81	5.06	4.64	6.00	4.55	3
318	307119	N93715	4.58	23.18	5.06	6.45	4.38	4.34	3
319	782766	AA448160	1.77	8.96	5.06	4.26	4.66	6.25	3
320	505864	AA683557	0.20	1.02	5.02	4.49	5.78	4.80	3
321	825411	AA504272	4.68	23.47	5.02	3.05	6.66	5.33	3
322	564803	AA129552	0.91	4.55	5.01	6.00	3.76	5.26	3
323	877767	AA626784	0.15	0.75	4.96	5.36	5.47	4.03	3
324	277163	N40939	4.90	24.26	4.95	3.28	4.74	6.82	3
325	757206	AA443969	2.34	11.53	4.92	3.32	5.83	5.61	3
326	810974	AA459632	1.37	6.70	4.90	4.46	3.84	6.41	3
327	767894	AA418918	0.54	2.66	4.87	3.38	5.34	5.90	3
328	431895	AA678135	0.32	1.54	4.83	5.12	4.57	4.80	3
329	502296	AA156599	0.19	0.90	4.81	3.32	5.49	5.64	3
330	1292828	AA776692	0.17	0.81	4.81	3.64	4.24	6.54	3
331	951142	AA620553	3.26	15.65	4.81	5.78	4.27	4.37	3
332	810785	AA481757	0.25	1.22	4.79	3.85	4.29	6.23	3
333	306146	N90523	1.02	4.83	4.75	5.62	3.94	4.69	3
334	283751	N50745	1.20	5.71	4.75	7.29	3.35	3.60	3
335	1467026	AA883127	0.09	0.45	4.71	4.52	4.33	5.29	3
336	1056200	AA621019	0.84	3.94	4.71	3.82	7.24	3.08	3
337	781341	AA448396	6.94	32.63	4.70	6.91	4.15	3.05	3
338	292068	N73301	0.78	3.65	4.70	5.91	4.89	3.31	3
339	249949	H97000	0.04	0.19	4.69	3.56	3.95	6.55	3
340	68406	T66936	0.74	3.48	4.67	5.15	3.86	5.01	3
341	376764	AA046321	0.36	1.69	4.65	5.09	5.23	3.64	3
342	52543	H23482	0.73	3.36	4.63	3.32	7.07	3.51	3
343	461775	AA682405	0.09	0.43	4.63	4.03	4.94	4.93	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

344	544664	AA074666	4.89	22.62	4.63	3.06	3.22	7.60	3
345	595109	AA173926	2.40	11.07	4.60	3.28	5.08	5.45	3
346	292933	N69491	0.67	3.08	4.60	4.85	3.14	5.80	3
347	287749	N62245	1.77	8.14	4.60	4.35	3.56	5.89	3
348	461235	AA699762	0.22	0.99	4.58	6.38	4.05	3.31	3
349	295551	N74956	15.03	68.72	4.57	3.02	5.75	4.95	3
350	186918	H43317	0.01	0.04	4.56	5.14	4.81	3.75	3
351	782800	AA448184	5.53	25.23	4.56	4.05	3.27	6.37	3
352	296155	W00895	1.25	5.67	4.55	4.56	3.51	5.59	3
353	282720	N50079	3.70	16.81	4.54	3.79	4.39	5.44	3
354	588840	AA157787	3.00	13.59	4.53	3.16	5.08	5.34	3
355	509479	AA056395	4.33	19.58	4.52	3.27	6.13	4.18	3
356	413071	AA707794	0.13	0.60	4.52	3.14	3.41	7.01	3
357	39798	R53294	0.85	3.85	4.51	5.43	3.36	4.75	3
358	970591	AA683085	29.84	133.80	4.48	3.35	5.80	4.30	3
359	814765	AA454947	2.35	10.51	4.48	5.20	5.13	3.12	3
360	490548	AA128799	1.22	5.43	4.46	5.70	4.50	3.19	3
361	795371	AA453273	2.35	10.45	4.45	4.16	5.42	3.76	3
362	358457	W96114	7.33	32.61	4.45	3.43	5.36	4.54	3
363	356732	W84486	0.67	2.96	4.43	4.85	4.44	4.00	3
364	1627623	AI014704	0.49	2.19	4.43	5.61	3.81	3.87	3
365	341942	W60015	2.28	10.04	4.40	3.32	4.59	5.27	3
366	842906	AA486430	1.04	4.57	4.39	3.03	3.33	6.82	3
367	1475463	AA857804	1.80	7.88	4.39	5.77	3.14	4.26	3
368	359135	AA010128	0.47	2.06	4.38	3.23	3.76	6.16	3
369	198104	R94633	0.21	0.93	4.38	4.72	3.33	5.10	3
370	249562	H84926	0.04	0.18	4.37	3.06	5.05	4.99	3
371	308466	N95495	2.29	9.99	4.36	5.17	4.31	3.59	3
372	324313	AA284108	0.02	0.09	4.34	3.11	6.72	3.19	3
373	280342	N49261	4.13	17.91	4.33	3.32	4.21	5.47	3
374	40881	R56055	0.15	0.64	4.32	4.06	4.72	4.18	3
375	250519	H89698	1.26	5.41	4.31	4.10	3.51	5.33	3
376	418150	W90164	0.62	2.65	4.31	3.30	6.39	3.24	3
377	258761	N30185	1.26	5.44	4.30	4.24	3.24	5.43	3
378	25274	R12804	0.39	1.66	4.29	3.40	5.79	3.69	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

379	684835	AA251826	0.63	2.72	4.29	3.87	4.70	4.31	3
380	417855	W88792	1.93	8.22	4.27	3.03	4.54	5.24	3
381	1556056	AA975388	0.19	0.82	4.25	3.90	3.93	4.93	3
382	502767	AA126259	0.42	1.80	4.25	3.90	3.05	5.79	3
383	453599	AA679569	1.66	7.01	4.23	6.00	3.07	3.61	3
384	42793	R59722	0.30	1.26	4.22	3.06	5.07	4.55	3
385	183771	H44448	2.36	9.98	4.22	3.65	5.59	3.43	3
386	365157	AA024637	2.33	9.83	4.22	3.26	5.64	3.75	3
387	324255	W47254	1.68	7.07	4.21	3.45	4.51	4.67	3
388	809421	AA459909	3.57	15.01	4.20	3.52	5.97	3.12	3
389	301867	N92478	0.36	1.52	4.20	3.30	4.63	4.67	3
390	825089	AA489247	0.11	0.45	4.19	3.43	4.75	4.40	3
391	365641	AA025937	1.29	5.38	4.19	3.00	3.59	5.97	3
392	76196	T59668	2.26	9.46	4.18	3.30	5.98	3.26	3
393	788566	AA452966	1.36	5.68	4.18	3.56	3.76	5.22	3
394	755301	AA496360	0.05	0.22	4.16	3.57	3.72	5.18	3
395	1387760	AA838691	1.66	6.85	4.14	4.66	4.62	3.14	3
396	510170	AA053129	6.42	26.51	4.13	3.38	4.00	5.01	3
397	127925	R08935	0.28	1.14	4.13	3.18	4.98	4.22	3
398	845380	AA644099	1.43	5.90	4.12	4.14	4.91	3.31	3
399	305538	N89861	5.14	21.16	4.11	4.96	4.11	3.26	3
400	548693	AA125825	0.49	2.02	4.11	4.24	3.39	4.71	3
401	125183	R05693	7.53	30.82	4.09	3.66	3.99	4.63	3
402	289945	N64617	0.64	2.60	4.08	3.25	3.58	5.40	3
403	431803	AA678021	17.87	72.78	4.07	3.72	5.27	3.23	3
404	824739	AA489000	1.22	4.98	4.07	3.33	4.59	4.30	3
405	136180	R33303	2.09	8.49	4.07	3.09	4.10	5.02	3
406	51469	H23985	2.11	8.55	4.05	3.08	3.13	5.93	3
407	461592	AA705142	2.49	10.05	4.04	5.90	3.14	3.07	3
408	290378	N64508	0.80	3.22	4.03	3.72	3.29	5.07	3
409	795830	AA460571	0.08	0.34	4.00	3.83	4.74	3.44	3
410	416390	W86860	2.29	9.11	3.99	3.72	3.60	4.63	3
411	150135	H01926	4.15	16.49	3.97	3.31	4.75	3.86	3
412	47681	H11792	8.31	32.97	3.97	3.15	3.42	5.33	3
413	271006	N29901	3.83	15.20	3.96	3.30	5.01	3.59	3

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

449	501731	AA127861	2.15	6.95	3.23	3.08	3.55	3.05	3
450	1640931	AI024401	0.21	0.66	3.13	3.14	3.07	3.17	3
451	299559	N74985	0.01	9.92	991.80	1.38	2966.06	7.96	2
452	365551	AA009615	0.01	8.39	838.64	1.96	2506.90	7.05	2
453	42627	R60995	0.01	9.14	660.46	2.32	61.14	1917.92	2
454	277327	N57483	0.01	9.00	613.07	1.58	1831.96	5.67	2
455	773640	AA433685	0.01	5.08	508.28	2.41	1516.35	6.10	2
456	121863	T97352	0.04	18.56	445.85	3.24	1331.89	2.42	2
457	754291	AA479498	0.01	4.34	433.98	2.48	1294.73	4.72	2
458	290213	N64379	0.01	3.94	393.88	0.73	1171.33	9.57	2
459	781157	AA429904	0.01	2.83	283.26	1.00	841.07	7.73	2
460	781036	AA448446	0.01	1.70	228.86	10.58	674.66	1.35	2
461	784216	AA446866	0.01	1.58	157.55	1.61	467.71	3.31	2
462	1377071	AA812676	0.01	1.54	154.10	3.95	457.34	1.00	2
463	609935	AA169154	0.02	2.74	114.55	1.41	338.20	4.03	2
464	203878	H58453	0.02	1.93	95.78	0.80	140.40	146.14	2
465	815794	AA485214	0.08	6.83	85.65	0.89	150.46	105.59	2
466	347182	W80611	0.01	0.82	81.58	1.42	229.57	13.76	2
467	611373	AA176833	0.01	0.71	70.86	2.42	205.80	4.35	2
468	746152	AA419486	0.08	5.16	65.49	0.87	95.72	99.88	2
469	395708	AA757754	0.01	0.83	60.41	6.88	173.62	0.73	2
470	684879	AA251784	0.05	2.87	58.88	1.03	51.92	123.70	2
471	344589	W73144	0.22	12.41	56.02	78.84	88.50	0.72	2
472	562811	AA086475	0.01	0.28	53.90	5.36	154.39	1.93	2
473	30207	R40231	0.04	2.21	52.11	0.54	150.40	5.39	2
474	1358266	AA873635	0.08	3.95	51.39	1.05	149.73	3.40	2
475	757435	AA437224	1.20	60.94	50.82	144.61	1.37	6.47	2
476	757143	AA443936	0.19	9.88	50.76	4.68	145.07	2.54	2
477	33827	R44741	0.02	1.10	50.72	0.63	139.36	12.17	2
478	825740	AA504844	0.26	13.02	49.67	0.91	56.58	91.51	2
479	813748	AA453802	0.01	0.49	49.10	3.38	142.92	1.00	2
480	1505360	AA905896	0.26	12.64	47.88	137.81	2.72	3.10	2
481	785849	AA449120	0.01	0.60	45.99	2.24	128.30	7.45	2
482	43101	R59936	0.01	0.46	45.56	1.92	130.70	4.06	2
483	714498	AA292429	0.02	0.87	44.45	4.84	125.65	2.84	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

484	811121	AA485888	0.01	0.44	44.03	3.52	127.57	1.00	2
485	743362	AA400385	0.04	1.89	43.31	2.77	123.35	3.82	2
486	1435339	AA857748	0.01	0.38	37.79	5.72	105.49	2.18	2
487	28422	R14230	0.46	17.33	37.42	0.83	107.04	4.40	2
488	530608	AA071089	0.01	0.38	36.23	3.89	103.70	1.11	2
489	774446	AA446120	0.05	1.69	36.22	1.20	103.43	4.04	2
490	428828	AA005254	0.01	0.35	35.29	1.77	100.95	3.14	2
491	186544	R91566	0.25	8.56	34.73	0.93	52.03	51.22	2
492	592928	AA159179	0.18	6.00	33.64	1.12	96.63	3.18	2
493	773083	AA425307	2.25	73.55	32.64	1.02	93.52	3.37	2
494	37823	R59473	0.03	1.12	32.46	1.79	89.38	6.23	2
495	49858	H29290	0.08	2.62	31.22	87.92	0.12	5.61	2
496	743189	AA401434	0.02	0.70	30.56	2.89	81.20	7.60	2
497	815861	AA485052	0.26	7.89	30.35	0.77	34.54	55.73	2
498	489856	AA099369	0.01	0.30	30.08	1.00	7.97	81.28	2
499	38347	R49439	0.21	5.88	27.65	1.51	76.38	5.06	2
500	167205	R90834	0.58	16.16	27.63	72.37	9.84	0.70	2
501	53039	R15740	0.01	0.27	27.34	0.74	70.25	11.03	2
502	796549	AA460274	0.01	0.27	27.13	1.21	59.04	11.15	2
503	771294	AA443624	0.01	0.20	27.04	8.33	1.36	71.43	2
504	194318	H50655	0.53	14.38	26.99	0.69	27.83	52.45	2
505	769000	AA425158	0.01	0.26	26.26	5.77	72.00	1.00	2
506	280699	N47445	0.55	14.15	25.90	2.28	11.75	63.66	2
507	283379	N52767	0.02	0.39	25.65	0.59	56.04	10.31	2
508	27605	R40018	0.07	1.90	25.57	2.05	68.60	6.05	2
509	530958	AA070437	0.01	0.25	25.21	2.29	67.88	5.46	2
510	436121	AA701996	0.02	0.60	25.17	3.88	71.30	0.34	2
511	53315	R15813	0.01	0.25	25.10	2.87	64.40	8.05	2
512	357884	W94486	0.01	0.25	24.95	2.32	41.17	31.35	2
513	172517	H19826	1.00	24.91	24.86	2.27	26.82	45.50	2
514	251806	H96647	0.01	0.24	24.50	1.76	60.48	11.25	2
515	80643	T57803	1.09	26.54	24.25	0.44	9.54	62.76	2
516	824025	AA490945	0.31	7.41	24.24	0.95	28.65	43.13	2
517	825606	AA504625	0.15	3.51	23.68	0.87	21.91	48.25	2
518	839882	AA490044	0.28	6.50	23.31	0.87	64.54	4.51	2



Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic-Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

519	81050	T70198	0.01	0.23	23.00	1.00	42.67	25.34	2
520	220655	H88143	0.01	0.30	22.12	3.92	61.72	0.73	2
521	591055	AA161097	0.02	0.34	21.79	2.34	9.53	53.51	2
522	824270	AA491261	0.17	3.65	21.71	0.88	10.05	54.20	2
523	46843	H10072	0.01	0.14	21.70	39.83	1.50	23.77	2
524	358316	W95757	0.02	0.51	21.13	0.72	58.79	3.87	2
525	267085	N24848	0.05	0.95	20.75	0.93	57.89	3.43	2
526	686552	AA255954	0.30	6.19	20.39	0.93	42.76	17.48	2
527	32962	R43910	0.05	1.02	20.24	56.76	0.20	3.78	2
528	199337	R95684	0.20	3.94	20.04	1.29	30.54	28.27	2
529	795831	AA461508	0.01	0.20	19.97	1.00	38.72	20.17	2
530	826256	AA520979	0.17	3.26	19.61	1.10	7.58	50.17	2
531	197265	R86970	0.01	0.20	19.50	2.79	10.31	45.41	2
532	162310	H28091	0.17	3.30	19.47	2.35	30.81	25.26	2
533	759163	AA496022	0.01	0.19	19.37	7.38	1.00	49.74	2
534	809583	AA456628	0.01	0.19	19.26	9.69	1.93	46.16	2
535	80338	T65736	1.11	21.01	18.93	41.41	14.31	1.08	2
536	1049284	AA620747	0.04	0.74	18.21	2.02	47.06	5.54	2
537	839048	AA487505	0.19	3.45	17.78	1.21	45.91	6.22	2
538	42907	R60020	0.03	0.54	17.62	1.87	45.44	5.54	2
539	361899	AA001376	0.01	0.17	17.44	1.97	34.15	16.22	2
540	823727	AA489662	0.03	0.44	17.25	2.37	40.61	8.77	2
541	1475476	AA857809	0.51	8.76	17.22	46.76	3.64	1.27	2
542	1410444	AA857163	0.06	1.06	17.19	1.87	37.48	12.21	2
543	756629	AA481481	0.01	0.11	16.78	14.65	1.51	34.18	2
544	266366	N26559	0.02	0.29	16.62	2.86	39.78	7.22	2
545	283070	N51297	0.07	1.14	16.47	2.84	40.90	5.65	2
546	825726	AA504838	0.19	2.94	15.84	2.63	16.52	28.36	2
547	746232	AA417713	0.38	5.98	15.64	0.69	21.09	25.15	2
548	647679	AA206311	0.17	2.60	15.42	1.59	41.42	3.27	2
549	291947	N73083	0.06	0.95	15.23	3.92	41.20	0.57	2
550	811766	AA463445	0.26	3.91	15.03	1.53	28.43	15.13	2
551	51599	H18932	0.26	3.94	14.95	0.42	26.10	18.34	2
552	37205	R49592	0.09	1.38	14.69	2.32	38.63	3.12	2
553	364865	AA035745	0.04	0.54	14.60	36.64	0.27	6.87	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

554	1455603	AA863125	0.38	5.51	14.53	3.43	38.09	2.07	2
555	770860	AA434388	0.01	0.14	14.40	1.00	18.93	23.25	2
556	785347	AA453260	0.03	0.42	14.24	3.59	36.42	2.72	2
557	30082	R40105	0.17	2.42	14.20	1.58	37.99	3.04	2
558	430237	AA010224	0.05	0.77	14.13	1.89	35.90	4.61	2
559	284001	N53380	0.88	12.46	14.13	36.41	2.96	3.01	2
560	436402	AA699601	0.16	2.19	14.09	0.88	36.28	5.10	2
561	418004	W90705	0.30	4.17	13.89	2.99	11.04	27.66	2
562	26806	R37738	0.10	1.31	13.68	2.42	26.44	12.18	2
563	771004	AA427719	0.29	3.95	13.50	0.64	21.58	18.27	2
564	49499	H15549	0.63	8.41	13.36	2.08	8.82	29.19	2
565	284288	N52193	0.01	0.08	13.00	10.97	1.54	26.50	2
566	364844	AA035730	0.03	0.36	12.97	30.80	0.76	7.37	2
567	361122	AA017379	0.01	0.13	12.88	0.65	12.28	25.70	2
568	1526789	AA911236	0.65	8.32	12.81	1.86	8.17	28.39	2
569	33066	R43915	0.06	0.71	12.79	7.14	29.01	2.23	2
570	530954	AA070435	0.16	1.99	12.64	1.33	31.49	5.10	2
571	47204	H11051	0.03	0.33	12.63	2.47	31.19	4.25	2
572	795446	AA453616	0.01	0.13	12.56	22.57	14.55	0.58	2
573	757428	AA437212	0.40	4.99	12.41	1.18	29.00	7.04	2
574	1049185	AA620697	0.76	9.44	12.39	10.40	0.39	28.39	2
575	364352	AA022496	0.01	0.12	12.38	1.96	14.19	20.98	2
576	47264	H10713	0.30	3.72	12.36	2.11	23.87	11.09	2
577	71671	T57827	0.01	0.12	12.24	6.29	29.43	1.00	2
578	812977	AA464617	1.53	18.67	12.17	29.85	2.25	4.42	2
579	195845	R92201	0.14	1.69	12.02	1.00	14.95	20.10	2
580	726797	AA398321	0.04	0.52	11.95	2.42	30.06	3.37	2
581	739450	AA477227	1.99	23.53	11.82	2.08	17.13	16.24	2
582	324484	W51785	0.01	0.12	11.78	2.89	4.46	28.00	2
583	796367	AA456143	0.01	0.12	11.74	0.81	30.95	3.44	2
584	591157	AA161188	0.02	0.18	11.71	0.58	20.54	14.01	2
585	345262	W72881	0.01	0.12	11.47	4.71	0.92	28.79	2
586	50982	H18015	0.06	0.70	11.45	1.92	28.84	3.60	2
587	753984	AA478952	0.66	7.46	11.23	2.83	27.04	3.82	2
588	1031561	AA609300	0.22	2.42	11.22	1.36	28.86	3.43	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

589	592728	AA160670	0.03	0.34	11.17	0.33	16.85	16.34	2
590	770854	AA427737	0.09	0.95	11.06	2.56	22.78	7.83	2
591	795526	AA454222	0.12	1.32	10.94	1.10	4.45	27.27	2
592	271483	N31808	0.01	0.11	10.91	3.77	1.00	27.95	2
593	193333	H48070	0.36	3.90	10.90	0.92	17.98	13.80	2
594	813738	AA453787	0.03	0.36	10.89	1.90	26.77	4.00	2
595	41869	R66438	0.10	1.12	10.87	2.21	25.57	4.84	2
596	753428	AA410434	0.57	6.12	10.84	0.51	15.37	16.62	2
597	298417	N74131	0.03	0.31	10.83	2.09	20.21	10.20	2
598	287190	N66900	0.29	3.13	10.82	1.79	27.39	3.26	2
599	257955	N30751	0.86	9.32	10.79	2.05	10.22	20.10	2
600	433155	AA680136	0.01	0.11	10.76	22.91	1.00	8.36	2
601	26164	R39765	0.75	7.96	10.65	2.40	25.25	4.31	2
602	824802	AA489073	0.77	8.09	10.50	0.74	8.99	21.77	2
603	797055	AA463248	0.72	7.51	10.47	1.14	25.88	4.40	2
604	448036	AA702803	1.83	18.95	10.38	25.10	1.37	4.66	2
605	731095	AA421171	1.22	12.67	10.36	4.91	23.39	2.78	2
606	307138	N93721	0.04	0.44	10.36	2.67	21.63	6.78	2
607	768043	AA418852	0.02	0.21	10.35	2.40	24.49	4.17	2
608	712401	AA281784	0.08	0.87	10.32	0.88	14.48	15.60	2
609	489509	AA099148	0.45	4.59	10.32	2.87	24.58	3.50	2
610	203184	H54451	0.41	4.21	10.31	0.86	6.31	23.76	2
611	277621	N49389	0.54	5.55	10.21	0.77	14.23	15.64	2
612	729953	AA412049	0.93	9.47	10.19	22.87	7.21	0.48	2
613	590640	AA158035	0.01	0.12	10.11	11.51	17.15	1.65	2
614	868838	AA775223	0.81	8.21	10.10	3.45	25.02	1.83	2
615	197651	R94504	0.25	2.53	10.07	0.93	11.85	17.42	2
616	740457	AA478036	1.60	16.05	10.05	2.67	6.06	21.42	2
617	745248	AA626167	0.24	2.42	9.97	8.61	20.18	1.12	2
618	855391	AA664007	0.23	2.29	9.95	1.40	12.15	16.30	2
619	781110	AA430042	0.01	0.10	9.90	4.50	24.20	1.00	2
620	725877	AA292226	0.50	4.94	9.89	0.67	13.69	15.31	2
621	133136	R25377	4.60	45.45	9.89	4.65	0.98	24.03	2
622	268135	N21633	0.39	3.82	9.87	1.10	17.62	10.88	2
623	154720	R55220	0.01	0.09	9.86	8.07	19.71	1.81	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

624	812994	AA464615	0.02	0.21	9.80	5.59	23.34	0.46	2
625	685801	AA262080	0.64	6.27	9.80	2.04	22.72	4.63	2
626	38598	R49126	0.28	2.73	9.79	1.50	24.64	3.25	2
627	490387	AA120778	0.02	0.21	9.77	1.35	22.17	5.78	2
628	951305	AA620528	0.62	5.97	9.68	1.31	9.16	18.56	2
629	782725	AA447986	0.01	0.10	9.67	1.13	23.22	4.67	2
630	512116	AA133590	0.64	6.12	9.62	0.66	21.91	6.28	2
631	841323	AA487432	0.48	4.60	9.57	0.81	24.53	3.39	2
632	195695	R89490	0.02	0.16	9.56	1.61	17.50	9.58	2
633	35804	R46000	0.08	0.77	9.53	2.05	15.63	10.89	2
634	362926	AA018980	0.70	6.70	9.51	24.42	3.74	0.37	2
635	375682	AA032221	1.37	12.98	9.50	23.58	3.03	1.89	2
636	630013	AA219060	0.15	1.40	9.48	1.15	11.85	15.44	2
637	320495	W16659	0.01	0.09	9.47	10.45	1.00	16.97	2
638	866702	AA679180	0.01	0.09	9.40	8.70	1.04	18.46	2
639	490959	AA136664	0.53	5.02	9.39	1.84	5.32	21.00	2
640	48226	H11519	0.41	3.84	9.37	0.66	23.58	3.86	2
641	435330	AA699926	0.01	0.08	9.36	8.59	1.12	18.37	2
642	247628	N54254	0.03	0.32	9.36	4.86	21.39	1.83	2
643	700792	AA284072	0.01	0.06	9.34	11.43	1.54	15.06	2
644	281162	N50962	0.02	0.22	9.31	0.97	12.53	14.44	2
645	204596	H57060	0.01	0.09	9.30	4.26	1.86	21.78	2
646	487165	AA045074	0.01	0.09	9.29	3.14	1.00	23.74	2
647	814791	AA455242	0.68	6.35	9.29	1.35	16.72	9.79	2
648	1627705	A1017607	0.44	4.10	9.26	2.30	7.70	17.77	2
649	230882	R95962	0.10	0.87	9.18	2.37	19.73	5.45	2
650	199577	R96579	0.27	2.44	9.12	0.81	13.04	13.51	2
651	320865	W44766	0.03	0.26	9.07	12.50	0.36	14.35	2
652	490556	AA100696	0.01	0.09	9.07	5.08	1.00	21.12	2
653	266259	N26515	0.35	3.21	9.06	1.65	10.87	14.67	2
654	627541	AA192527	0.40	3.62	9.05	1.54	20.24	5.38	2
655	877632	AA488175	1.17	10.62	9.04	2.44	15.22	9.46	2
656	594758	AA172056	1.30	11.71	9.03	12.54	13.45	1.10	2
657	591095	AA158346	0.48	4.35	8.99	1.42	21.38	4.17	2
658	951241	AA620485	1.98	17.81	8.98	10.05	0.30	16.60	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

3	3.60	4.14	4.14	3.96	3.60	0.91	AA188366	625764	414
3	4.71	3.46	3.65	3.94	8.02	2.04	AI023724	1654974	415
3	3.55	3.70	4.53	3.93	1.14	0.29	H50656	194305	416
3	4.15	4.45	3.19	3.93	1.32	0.34	R43205	32870	417
3	3.57	4.07	4.14	3.93	8.89	2.27	AA448676	786083	418
3	3.47	3.83	4.47	3.92	1.69	0.43	AA211448	613126	419
3	4.72	3.75	3.28	3.92	16.90	4.31	N69283	293576	420
3	4.12	3.12	4.33	3.86	0.09	0.02	T86527	115230	421
3	3.09	3.09	5.38	3.85	11.74	3.05	AA436152	754355	422
3	3.67	3.02	4.86	3.85	10.26	2.66	T50139	77244	423
3	3.36	3.36	4.81	3.84	11.13	2.90	AA453832	813675	424
3	3.58	3.33	4.55	3.82	4.47	1.17	N72697	295710	425
3	3.59	4.39	3.23	3.74	0.04	0.01	AA630016	884690	426
3	4.65	3.48	3.07	3.74	0.95	0.25	AA777092	377884	427
3	3.19	4.03	3.83	3.68	0.34	0.09	AA775888	453642	428
3	3.51	3.46	4.08	3.68	10.51	2.85	AA974348	1586340	429
3	3.86	3.85	3.33	3.68	20.94	5.69	AA426341	757404	430
3	4.45	3.30	3.24	3.66	0.59	0.16	AA625558	745286	431
3	3.28	4.40	3.28	3.66	8.80	2.41	AA428422	773599	432
3	3.25	4.23	3.48	3.66	5.73	1.57	AA043552	487723	433
3	3.02	3.21	4.71	3.65	0.95	0.26	N79353	288658	434
3	3.76	3.12	4.05	3.64	2.51	0.69	N57526	279920	435
3	3.19	4.25	3.48	3.64	14.21	3.91	AA453679	813648	436
3	4.37	3.26	3.22	3.62	7.22	2.00	R35230	136744	437
3	3.70	3.44	3.70	3.61	10.00	2.77	AA046523	487425	438
3	3.07	3.72	3.96	3.58	15.14	4.22	AA157129	589479	439
3	3.62	3.96	3.05	3.54	4.95	1.40	H94617	256260	440
3	3.24	3.73	3.59	3.52	3.54	1.01	AA191461	827273	441
3	3.32	3.84	3.29	3.49	2.80	0.80	AA986230	1604596	442
3	3.59	3.36	3.47	3.47	19.64	5.65	AA488445	843224	443
3	3.02	4.21	3.04	3.42	0.64	0.19	AA448394	781339	444
3	3.60	3.22	3.42	3.41	2.45	0.72	R93309	275653	445
3	3.80	3.43	3.01	3.41	19.81	5.81	AA485773	840384	446
3	3.59	3.12	3.46	3.39	3.62	1.07	AA707840	412949	447
3	3.13	3.16	3.82	3.37	4.57	1.36	AA421273	731044	448

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

659	730036	AA416970	0.02	0.21	8.96	0.65	20.84	5.40	2
660	342640	W68220	0.67	5.97	8.87	11.72	2.96	11.94	2
661	175533	H41203	0.38	3.32	8.84	0.92	17.16	8.45	2
662	50227	H16772	0.25	2.16	8.81	9.92	2.08	14.43	2
663	884511	AA629999	4.51	39.21	8.70	0.36	17.44	8.30	2
664	1048995	AA778646	0.09	0.80	8.69	1.34	6.64	18.10	2
665	345761	W72671	0.53	4.61	8.69	3.59	21.88	0.61	2
666	743589	AA609471	1.12	9.68	8.68	1.16	21.71	3.16	2
667	878544	AA775863	3.96	34.28	8.65	1.87	16.58	7.50	2
668	28927	R40373	0.59	5.05	8.60	0.60	21.85	3.36	2
669	897546	AA496998	0.01	0.09	8.56	10.33	1.00	14.35	2
670	462926	AA682321	0.60	5.11	8.53	6.22	0.52	18.86	2
671	300615	N80764	0.83	6.98	8.42	0.78	6.50	17.99	2
672	115408	T87515	1.40	11.80	8.41	1.96	3.76	19.50	2
673	324717	W47364	1.13	9.51	8.39	1.45	12.46	11.27	2
674	825416	AA504265	0.40	3.36	8.39	1.30	11.51	12.36	2
675	484535	AA036974	0.01	0.08	8.39	1.81	6.16	17.21	2
676	566887	AA132226	0.01	0.08	8.34	4.16	18.57	2.28	2
677	296429	N74617	1.62	13.45	8.31	2.41	6.27	16.24	2
678	842968	AA488324	1.30	10.75	8.30	5.22	0.41	19.27	2
679	37980	R61372	0.13	1.09	8.29	8.74	13.18	2.96	2
680	280882	N50806	0.02	0.15	8.25	9.98	1.67	13.09	2
681	380884	AA058576	0.18	1.49	8.21	2.23	11.14	11.26	2
682	153355	R47893	0.02	0.16	8.16	4.39	19.58	0.50	2
683	503581	AA131239	0.02	0.14	8.15	5.83	0.56	18.07	2
684	784285	AA447504	2.68	21.79	8.13	0.11	20.61	3.68	2
685	433253	AA699427	0.76	6.11	8.08	1.22	13.54	9.48	2
686	435488	AA701351	2.00	16.15	8.07	1.99	17.84	4.38	2
687	796117	AA460961	0.01	0.09	8.04	3.70	2.94	17.47	2
688	838776	AA457576	0.03	0.22	8.03	0.38	18.34	5.36	2
689	230261	H94944	0.01	0.08	8.02	2.25	8.34	13.46	2
690	841620	AA487674	0.71	5.71	8.00	0.81	4.66	18.54	2
691	193892	H51765	1.10	8.81	8.00	0.92	14.68	8.40	2
692	701625	AA284172	0.29	2.29	7.89	1.06	13.94	8.68	2
693	417920	W90381	1.98	15.64	7.89	2.43	18.08	3.15	2

**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line. Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

694	287598	N62132	1.08	8.53	7.89	4.16	16.63	2.87	2
695	1420830	AA826324	0.94	7.39	7.83	18.23	1.50	3.76	2
696	38833	R50775	0.66	5.20	7.83	2.27	15.21	6.01	2
697	345090	W74362	2.76	21.45	7.78	1.62	3.07	18.64	2
698	48330	H14949	0.14	1.06	7.74	18.13	4.09	0.99	2
699	502444	AA156795	0.02	0.14	7.73	0.57	7.43	15.20	2
700	788217	AA453437	0.24	1.86	7.73	0.97	17.32	4.90	2
701	204644	H57082	0.27	2.05	7.70	1.18	12.63	9.28	2
702	810661	AA483982	0.01	0.08	7.69	7.96	14.11	1.00	2
703	435351	AA700739	2.93	22.51	7.67	1.69	3.87	17.46	2
704	46927	H10231	0.07	0.53	7.67	2.09	11.89	9.03	2
705	46740	H10068	0.03	0.25	7.66	1.41	14.72	6.84	2
706	1035664	AA780365	0.13	1.03	7.65	12.36	8.59	2.00	2
707	561971	AA088886	3.04	23.26	7.64	2.69	16.52	3.72	2
708	345743	W72666	2.36	18.06	7.64	1.23	16.02	5.66	2
709	120695	T95804	0.01	0.08	7.61	0.83	12.70	9.32	2
710	725340	AA291773	0.72	5.46	7.60	1.27	5.74	15.79	2
711	41789	R59197	1.59	12.06	7.57	3.02	17.38	2.32	2
712	448032	AA702802	0.01	0.08	7.54	5.64	1.00	15.99	2
713	39833	R53455	0.97	7.28	7.53	0.35	12.36	9.88	2
714	868169	AA633835	0.16	1.18	7.49	1.25	5.39	15.83	2
715	506018	AA708441	0.70	5.21	7.48	3.13	18.13	1.19	2
716	811166	AA485749	0.01	0.08	7.46	12.26	0.92	9.18	2
717	447167	AA702973	0.33	2.44	7.45	1.82	15.92	4.60	2
718	128243	R12473	0.83	6.14	7.44	1.30	8.97	12.04	2
719	37538	R49644	0.04	0.31	7.41	0.99	11.96	9.29	2
720	826995	AA521384	1.19	8.77	7.36	1.89	4.20	15.98	2
721	429519	AA011390	0.60	4.44	7.35	1.85	16.45	3.75	2
722	278729	N62836	1.35	9.91	7.34	0.34	13.66	8.02	2
723	814288	AA459008	1.12	8.19	7.31	2.29	4.08	15.57	2
724	66317	T66816	3.88	28.27	7.29	6.83	0.63	14.40	2
725	451907	AA706968	2.08	15.11	7.27	11.07	0.08	10.67	2
726	31299	R42946	0.52	3.80	7.27	4.52	16.05	1.23	2
727	266631	N22766	0.05	0.35	7.24	1.57	9.92	10.22	2
728	32756	R43308	0.30	2.20	7.23	7.23	2.06	12.41	2

**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

729	50904	H19234	0.16	1.17	7.23	1.81	13.06	6.82	2
730	565734	AA135809	1.24	8.99	7.23	2.92	12.65	6.11	2
731	359722	AA011182	0.04	0.31	7.22	1.78	13.48	6.43	2
732	809828	AA455521	0.64	4.64	7.20	2.72	7.61	11.27	2
733	782503	AA431773	1.57	11.27	7.19	2.94	3.28	15.36	2
734	504308	AA131909	1.19	8.56	7.18	2.29	3.21	16.05	2
735	501868	AA128005	0.03	0.24	7.18	2.42	4.52	14.61	2
736	825282	AA504201	2.23	15.96	7.17	2.25	8.89	10.38	2
737	897271	AA677655	0.02	0.11	7.14	0.87	8.75	11.80	2
738	1416782	AA894557	14.77	105.24	7.13	13.51	0.03	7.84	2
739	814779	AA455237	2.03	14.44	7.12	2.47	11.28	7.62	2
740	785845	AA449118	0.09	0.62	7.11	13.68	2.34	5.32	2
741	189644	R96520	0.21	1.51	7.11	1.14	11.35	8.84	2
742	812294	AA455087	0.44	3.14	7.11	4.89	15.66	0.77	2
743	278531	N66158	13.50	95.95	7.11	2.00	12.50	6.81	2
744	366778	AA029722	0.04	0.26	7.05	3.04	17.83	0.27	2
745	898333	AA598849	0.42	2.95	7.02	1.98	14.80	4.28	2
746	247050	N53840	0.29	2.01	7.02	1.68	7.50	11.87	2
747	345330	W72556	0.04	0.28	7.00	0.85	5.67	14.49	2
748	731139	AA417288	0.25	1.75	6.98	0.86	16.93	3.14	2
749	82215	T68878	0.10	0.68	6.95	2.37	9.22	9.27	2
750	811067	AA485453	5.22	36.26	6.95	2.09	8.38	10.38	2
751	841221	AA486741	0.01	0.05	6.94	3.97	1.38	15.45	2
752	79254	T58146	0.01	0.07	6.93	14.50	5.14	1.16	2
753	1500162	AA886739	0.55	3.78	6.90	2.34	9.72	8.65	2
754	856585	AA669222	0.01	0.06	6.89	7.04	1.10	12.53	2
755	787938	AA452278	0.40	2.74	6.88	10.95	1.51	8.19	2
756	79761	T63980	3.48	23.86	6.86	4.74	2.38	13.46	2
757	586650	AA129135	0.69	4.75	6.85	2.73	8.48	9.34	2
758	1641367	A1025259	0.12	0.83	6.84	1.77	7.15	11.61	2
759	1556526	AA935560	0.49	3.35	6.83	13.90	2.82	3.78	2
760	726791	AA398406	0.04	0.25	6.83	1.52	13.88	5.09	2
761	204580	H56903	0.41	2.79	6.80	1.22	12.71	6.48	2
762	131094	R23246	0.69	4.70	6.80	1.08	3.80	15.52	2
763	813275	AA455940	0.83	5.63	6.79	0.68	16.50	3.19	2



Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

764	279397	N48707	1.05	7.09	6.77	3.45	15.10	1.76	2
765	809503	AA454562	0.24	1.65	6.77	12.08	7.25	0.98	2
766	811582	AA454597	1.50	10.08	6.74	9.56	1.82	8.83	2
767	280154	N47008	1.47	9.88	6.73	0.64	16.41	3.12	2
768	725677	AA398949	1.11	7.44	6.71	2.08	10.73	7.33	2
769	43759	H05085	0.58	3.87	6.71	3.11	14.81	2.21	2
770	1475028	AA857413	62.96	421.08	6.69	1.87	4.25	13.94	2
771	40038	R53446	0.51	3.42	6.68	1.33	3.97	14.72	2
772	321900	W37447	0.59	3.96	6.67	1.35	14.02	4.64	2
773	1461316	AA883391	0.45	3.02	6.67	2.21	13.65	4.14	2
774	593185	AA165678	2.70	17.94	6.65	14.01	1.82	4.12	2
775	768172	AA424790	1.17	7.75	6.64	11.27	0.58	8.09	2
776	781362	AA448400	0.01	0.07	6.62	7.97	10.05	1.85	2
777	73638	T55728	9.61	63.60	6.62	1.16	9.16	9.54	2
778	504396	AA142869	0.40	2.64	6.58	2.28	12.93	4.54	2
779	470001	AA029897	0.22	1.48	6.58	1.02	13.90	4.81	2
780	46916	H09997	0.24	1.57	6.58	4.61	13.84	1.28	2
781	375827	AA039851	0.02	0.12	6.57	2.44	7.59	9.68	2
782	72441	T51617	0.04	0.24	6.51	1.47	11.33	6.74	2
783	300276	N78745	0.81	5.27	6.51	1.45	4.25	13.83	2
784	32134	R43328	1.01	6.55	6.50	2.35	11.59	5.55	2
785	1573251	AA953357	1.34	8.71	6.49	10.79	2.65	6.04	2
786	898098	AA598796	1.56	10.14	6.49	2.34	13.27	3.84	2
787	135688	R32406	0.43	2.76	6.48	14.04	3.01	2.39	2
788	565493	AA129677	0.01	0.07	6.47	4.90	1.84	12.67	2
789	773564	AA428186	0.02	0.12	6.46	2.50	9.29	7.59	2
790	877784	AA626788	4.30	27.63	6.43	1.38	9.13	8.78	2
791	788488	AA452542	0.07	0.45	6.42	2.05	11.14	6.08	2
792	786078	AA448664	1.05	6.74	6.41	2.85	6.70	9.70	2
793	159462	H15910	0.03	0.21	6.41	5.69	12.25	1.28	2
794	194717	R89846	0.26	1.66	6.39	0.90	6.06	12.22	2
795	268711	N25936	1.55	9.86	6.37	13.36	1.59	4.18	2
796	277112	N39611	0.59	3.76	6.37	2.87	7.88	8.37	2
797	810996	AA485351	0.02	0.11	6.37	1.95	13.18	3.99	2
798	772410	AA405533	0.71	4.54	6.37	1.54	5.53	12.04	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

799	196824	R93068	0.24	1.50	6.36	0.76	12.20	6.13	2
800	814211	AA465223	1.01	6.46	6.36	1.48	6.38	11.23	2
801	448417	AA777555	0.53	3.38	6.36	13.51	4.43	1.13	2
802	85409	T71991	4.22	26.80	6.35	2.86	4.38	11.81	2
803	814444	AA459244	0.77	4.87	6.31	1.06	8.03	9.86	2
804	486538	AA042812	8.25	51.96	6.30	1.79	10.78	6.32	2
805	416075	W85878	0.93	5.87	6.29	2.64	8.05	8.17	2
806	289496	N63988	0.35	2.21	6.28	1.45	10.13	7.26	2
807	302221	N77828	0.22	1.37	6.27	7.40	2.46	8.95	2
808	203179	H54659	0.25	1.58	6.27	2.11	8.82	7.88	2
809	34254	R44201	0.02	0.15	6.27	2.51	6.21	10.08	2
810	267135	N24869	0.37	2.29	6.25	0.27	5.01	13.49	2
811	769857	AA430367	2.19	13.69	6.25	13.18	0.27	5.30	2
812	1475308	AA877997	0.80	4.98	6.24	13.52	3.53	1.69	2
813	435957	AA701978	0.66	4.11	6.23	0.87	12.34	5.48	2
814	23073	R38539	0.22	1.36	6.22	0.68	8.92	9.06	2
815	52128	H22568	1.94	12.01	6.20	1.35	7.60	9.66	2
816	854897	AA630373	0.64	3.99	6.20	2.28	12.42	3.89	2
817	320602	W31389	0.01	0.08	6.20	11.05	0.76	6.77	2
818	461933	AA779949	1.43	8.84	6.19	12.11	3.72	2.74	2
819	277476	N58875	0.05	0.33	6.16	1.20	10.69	6.60	2
820	1470195	AA865924	0.42	2.57	6.15	8.48	2.18	7.78	2
821	854701	AA630104	2.60	15.94	6.13	0.57	7.55	10.29	2
822	770992	AA430744	2.03	12.43	6.13	6.15	2.69	9.56	2
823	1032080	AA609891	0.47	2.89	6.13	1.59	7.76	9.04	2
824	950945	AA608752	1.63	10.01	6.12	1.47	13.05	3.85	2
825	133192	R26456	0.02	0.15	6.12	4.68	12.18	1.49	2
826	195817	R92186	0.39	2.40	6.11	1.12	9.73	7.48	2
827	781109	AA430052	2.62	16.02	6.11	2.39	8.86	7.07	2
828	753862	AA410517	34.08	207.98	6.10	2.76	3.64	11.91	2
829	814303	AA459106	4.36	26.54	6.09	1.52	11.73	5.03	2
830	33342	R44617	0.01	0.06	6.06	13.72	3.46	1.00	2
831	378016	AA775557	0.12	0.70	6.03	1.70	4.07	12.34	2
832	594693	AA165313	0.88	5.33	6.03	4.85	0.62	12.62	2
833	788225	AA453441	2.71	16.34	6.02	1.83	11.45	4.79	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

834	38027	R59369	0.07	0.39	6.02	2.14	11.73	4.18	2
835	813410	AA458646	1.29	7.71	6.00	2.89	9.92	5.20	2
836	1292190	AA705840	0.09	0.54	5.99	4.63	10.65	2.68	2
837	814080	AA465353	1.48	8.89	5.99	0.97	9.75	7.25	2
838	825284	AA504202	1.39	8.34	5.98	2.44	7.62	7.87	2
839	276972	N39233	0.50	2.99	5.98	1.57	8.57	7.79	2
840	49204	H15696	1.28	7.64	5.98	2.42	11.00	4.51	2
841	45607	H08210	0.08	0.49	5.96	2.48	3.88	11.52	2
842	1505686	AA878423	0.09	0.55	5.96	2.30	9.04	6.52	2
843	563860	AA101173	0.12	0.69	5.93	0.97	11.46	5.38	2
844	289645	N62868	0.31	1.85	5.93	11.41	0.30	6.09	2
845	272888	N36008	2.68	15.84	5.91	1.63	7.34	8.76	2
846	796366	AA456135	0.91	5.37	5.91	13.24	3.44	1.04	2
847	284783	N59866	0.06	0.36	5.90	6.66	8.19	2.86	2
848	771165	AA428474	1.11	6.55	5.89	2.20	11.44	4.05	2
849	1048949	AA778603	0.13	0.76	5.88	0.84	8.58	8.22	2
850	246549	N73252	0.43	2.56	5.88	1.87	6.81	8.94	2
851	773367	AA425664	0.05	0.30	5.85	1.25	12.13	4.16	2
852	429376	AA007529	0.29	1.67	5.84	10.90	2.57	4.04	2
853	1343468	AA709271	0.69	4.03	5.83	8.54	2.32	6.64	2
854	488516	AA044565	0.07	0.41	5.83	3.22	12.15	2.11	2
855	150623	H02158	0.01	0.06	5.82	6.78	1.00	9.69	2
856	506032	AA708446	1.32	7.68	5.80	2.25	3.75	11.41	2
857	814995	AA465090	0.83	4.83	5.80	2.24	9.55	5.62	2
858	287349	N69068	0.75	4.34	5.79	1.15	12.93	3.29	2
859	429352	AA007516	0.69	4.01	5.79	3.05	13.23	1.09	2
860	430336	AA010619	0.03	0.14	5.79	0.30	4.68	12.39	2
861	1031113	AA608914	0.04	0.22	5.79	1.21	10.89	5.26	2
862	508483	AA708605	0.10	0.59	5.76	1.96	10.22	5.11	2
863	36480	R46784	0.35	2.01	5.76	1.36	11.11	4.82	2
864	287581	N62128	0.82	4.73	5.76	5.27	10.45	1.55	2
865	26505	R20639	0.15	0.84	5.76	4.39	1.25	11.63	2
866	28475	R13434	0.46	2.62	5.74	1.10	7.72	8.40	2
867	38510	R50752	0.59	3.37	5.74	2.46	7.30	7.45	2
868	46862	H10788	1.07	6.12	5.73	2.42	9.02	5.77	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

869	191546	H37817	0.24	1.35	5.72	0.89	6.27	10.01	2
870	42842	R60223	0.33	1.90	5.71	1.62	12.44	3.07	2
871	27817	R40481	0.03	0.15	5.71	2.14	9.62	5.38	2
872	34063	R45952	0.28	1.58	5.68	5.72	9.78	1.55	2
873	291374	N72274	1.00	5.71	5.68	1.00	6.51	9.54	2
874	282104	N51498	0.51	2.92	5.68	5.83	9.35	1.87	2
875	503865	AA131707	1.39	7.88	5.68	1.17	12.71	3.16	2
876	196037	R89363	0.41	2.35	5.68	1.17	8.12	7.73	2
877	878600	AA775259	1.27	7.19	5.67	1.02	4.30	11.69	2
878	429517	AA011389	0.01	0.06	5.67	3.76	1.00	12.25	2
879	39219	R51382	0.14	0.81	5.66	3.85	12.66	0.46	2
880	433474	AA699560	3.28	18.53	5.65	8.40	2.36	6.19	2
881	856592	AA689218	1.19	6.68	5.64	10.55	1.37	5.00	2
882	395609	AA757588	0.05	0.25	5.62	0.55	7.77	8.55	2
883	770979	AA427400	0.02	0.10	5.62	5.02	0.44	11.39	2
884	357344	W93500	0.01	0.06	5.62	5.85	8.42	2.59	2
885	869375	AA679907	0.03	0.18	5.61	1.75	11.49	3.58	2
886	950926	AA608730	3.17	17.75	5.60	8.06	1.28	7.48	2
887	361688	W96197	0.01	0.07	5.60	0.80	10.00	5.99	2
888	193139	H47315	0.03	0.17	5.59	1.43	9.88	5.46	2
889	121798	T98201	0.72	4.03	5.59	6.89	7.41	2.47	2
890	789049	AA452909	1.97	11.01	5.58	1.16	11.14	4.42	2
891	43977	H05563	0.70	3.89	5.55	11.02	1.27	4.36	2
892	471707	AA035580	0.66	3.65	5.55	6.12	2.85	7.67	2
893	783987	AA443286	0.01	0.05	5.53	3.23	12.83	0.55	2
894	878798	AA670408	23.98	132.57	5.53	1.02	7.04	8.52	2
895	1505898	AA907714	0.07	0.41	5.52	2.10	8.01	6.45	2
896	130858	R22206	0.99	5.42	5.50	2.27	10.54	3.69	2
897	839081	AA487608	12.19	66.94	5.49	7.57	0.09	8.81	2
898	130845	R22308	2.02	11.11	5.49	0.87	7.74	7.85	2
899	241432	H80685	1.63	8.93	5.48	7.11	7.84	1.70	2
900	179556	H51425	0.01	0.05	5.48	3.34	1.00	12.10	2
901	197206	R92812	0.98	5.38	5.47	0.67	8.14	7.61	2
902	825408	AA504262	1.29	7.03	5.47	1.85	10.90	3.66	2
903	525799	AA074446	0.41	2.26	5.46	4.45	1.50	10.42	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

904	773170	AA428514	0.05	0.26	5.45	1.75	8.29	6.30	2
905	256720	H96356	0.01	0.05	5.44	1.86	6.97	7.49	2
906	195786	R89287	0.19	1.05	5.44	1.09	6.79	8.44	2
907	1466998	AA884428	0.08	0.45	5.43	2.62	8.15	5.51	2
908	451805	AA706829	6.18	33.51	5.42	1.61	5.96	8.69	2
909	1467751	AA883100	0.11	0.59	5.41	1.84	6.69	7.71	2
910	1580342	AA969184	0.18	1.00	5.40	1.10	3.31	11.81	2
911	85561	T73031	0.02	0.12	5.40	2.12	10.54	3.53	2
912	50939	H18630	0.51	2.76	5.39	1.04	10.79	4.35	2
913	814350	AA458827	1.32	7.13	5.38	2.06	5.32	8.77	2
914	823566	AA497034	2.10	11.29	5.38	1.01	10.96	4.15	2
915	34462	R44292	0.01	0.05	5.38	4.05	1.00	11.07	2
916	741790	AA402965	2.17	11.61	5.35	1.13	6.68	8.24	2
917	345077	W72310	0.05	0.28	5.33	1.34	10.44	4.21	2
918	156473	R73525	0.01	0.05	5.32	8.91	1.01	6.03	2
919	129664	R16676	1.18	6.28	5.31	1.15	7.63	7.16	2
920	898258	AA598668	0.40	2.11	5.31	1.02	7.20	7.71	2
921	878550	AA775865	2.76	14.65	5.30	2.14	3.73	10.03	2
922	813997	AA455652	4.09	21.66	5.30	0.94	5.86	9.09	2
923	265102	N21334	0.76	4.03	5.29	1.07	9.61	5.20	2
924	247089	N57858	0.04	0.23	5.29	1.93	6.76	7.18	2
925	108395	T77840	3.81	20.12	5.29	2.59	8.00	5.27	2
926	1055831	AA628190	0.08	0.41	5.28	2.22	6.68	6.95	2
927	345787	W72679	0.85	4.49	5.27	4.81	0.18	10.80	2
928	204289	H59305	0.70	3.68	5.26	5.35	2.95	7.50	2
929	1505735	AA879474	0.03	0.14	5.26	5.79	2.97	7.02	2
930	264646	N20338	0.03	0.15	5.26	0.36	4.37	11.04	2
931	1048685	AA620614	0.11	0.58	5.24	2.21	5.07	8.43	2
932	490753	AA133166	8.60	44.95	5.23	1.93	7.32	6.43	2
933	594517	AA169645	2.92	15.25	5.23	2.51	5.49	7.68	2
934	758360	AA404290	0.02	0.08	5.22	4.20	10.92	0.55	2
935	324665	AA284280	0.36	1.87	5.21	3.19	10.57	1.88	2
936	321386	W32272	0.15	0.76	5.20	10.06	1.80	3.74	2
937	489881	AA121504	0.09	0.46	5.20	3.27	10.71	1.61	2
938	784126	AA446748	0.07	0.35	5.19	2.95	5.99	6.64	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostate Epithelial Cell Line Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

939	845602	AA644334	1.83	9.47	5.18	1.72	6.91	6.90	2
940	768146	AA426561	0.10	0.51	5.17	1.23	9.14	5.15	2
941	726658	AA398218	0.01	0.05	5.15	7.12	1.00	7.33	2
942	501934	AA129931	4.32	22.27	5.15	4.21	1.15	10.09	2
943	415806	W84774	0.01	0.06	5.15	6.70	0.80	7.94	2
944	263342	H99997	1.94	9.93	5.12	1.82	3.54	10.01	2
945	23658	R38169	0.01	0.07	5.11	0.72	11.06	3.56	2
946	1293016	AA683338	0.04	0.19	5.11	1.68	5.30	8.34	2
947	448920	AA777779	0.08	0.43	5.10	1.62	8.40	5.28	2
948	491524	AA148505	6.40	32.60	5.09	1.14	9.02	5.12	2
949	155575	R71689	0.39	1.98	5.09	2.35	5.29	7.63	2
950	1602209	AA962541	3.26	16.55	5.07	6.08	8.82	0.32	2
951	739247	AA421230	8.07	40.76	5.05	1.54	8.12	5.48	2
952	824109	AA490605	0.04	0.22	5.04	0.82	8.65	5.67	2
953	243653	N49899	0.69	3.45	5.02	1.63	5.51	7.92	2
954	206052	H81552	0.91	4.54	4.99	0.91	8.28	5.79	2
955	504279	AA149637	1.71	8.53	4.99	7.00	6.10	1.87	2
956	825603	AA504631	5.33	26.53	4.97	1.25	10.25	3.42	2
957	264162	N20480	0.39	1.93	4.97	1.99	6.33	6.61	2
958	34294	R44346	1.28	6.34	4.95	0.98	8.07	5.79	2
959	186132	H39560	0.01	0.05	4.94	8.10	5.74	0.97	2
960	784772	AA478542	1.78	8.75	4.92	0.97	8.14	5.65	2
961	147925	R82041	0.06	0.30	4.91	1.91	6.08	6.75	2
962	277545	N56982	0.43	2.11	4.90	1.20	6.72	6.79	2
963	563201	AA114106	0.02	0.08	4.90	5.15	7.27	2.27	2
964	50114	H16743	1.70	8.32	4.90	0.37	7.99	6.33	2
965	1504152	AA904969	0.14	0.71	4.89	1.97	6.45	6.25	2
966	40721	R55750	0.30	1.49	4.88	1.57	7.62	5.46	2
967	471598	AA035384	7.11	34.71	4.88	2.09	5.39	7.16	2
968	486787	AA043228	5.90	28.69	4.87	0.13	3.68	10.79	2
969	290560	N62372	2.16	10.43	4.84	2.45	5.47	6.59	2
970	809508	AA454554	0.01	0.05	4.83	8.44	5.04	1.00	2
971	382451	AA064627	2.91	13.99	4.80	0.71	8.39	5.32	2
972	32517	R43271	0.01	0.05	4.80	7.91	5.50	1.00	2
973	838568	AA456931	19.35	92.90	4.80	2.12	5.68	6.60	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

974	258966	N31641	1.57	7.55	4.80	1.94	5.26	7.20	2
975	503715	AA131526	5.14	24.62	4.79	2.51	6.24	5.62	2
976	156048	R72434	0.02	0.10	4.78	3.62	10.08	0.65	2
977	154472	R54846	0.72	3.44	4.77	1.60	6.79	5.93	2
978	204129	H55915	0.35	1.68	4.75	1.18	6.82	6.25	2
979	826089	AA521411	0.13	0.60	4.75	1.30	6.47	6.47	2
980	123255	R00275	0.92	4.36	4.75	2.49	5.38	6.37	2
981	453005	AA779165	3.47	16.44	4.74	5.66	0.08	8.48	2
982	460553	AA700415	0.06	0.31	4.74	2.27	5.74	6.21	2
983	43826	H05768	0.96	4.54	4.72	2.52	5.51	6.12	2
984	432732	AA701587	0.03	0.12	4.67	6.88	1.33	5.80	2
985	882488	AA676590	0.06	0.27	4.65	6.62	5.90	1.44	2
986	46097	H08796	0.39	1.82	4.65	5.94	2.63	5.38	2
987	809466	AA443084	0.90	4.18	4.63	2.19	5.33	6.39	2
988	745192	AA626847	1.12	5.17	4.62	2.36	5.63	5.88	2
989	898083	AA598787	3.37	15.49	4.59	2.32	5.20	6.25	2
990	796606	AA460521	0.97	4.45	4.59	2.55	5.24	5.98	2
991	327245	AA284291	0.98	4.50	4.59	2.99	5.72	5.05	2
992	744044	AA629251	0.01	0.06	4.58	5.99	0.75	7.00	2
993	882355	AA676296	2.64	12.03	4.56	6.34	5.06	2.28	2
994	261567	H98655	2.99	13.59	4.54	1.15	6.62	5.85	2
995	824728	AA488979	1.11	5.05	4.54	0.93	7.47	5.23	2
996	283208	N51367	0.59	2.67	4.54	0.99	7.39	5.23	2
997	453229	AA704858	0.08	0.38	4.54	1.08	5.53	7.00	2
998	132954	R24451	0.65	2.96	4.53	2.21	5.84	5.54	2
999	731031	AA421270	8.95	40.40	4.52	2.12	6.30	5.12	2
1000	1468466	AA885096	0.60	2.71	4.50	5.38	2.55	5.56	2
1001	206272	H58542	1.42	6.39	4.50	1.27	5.28	6.95	2
1002	75650	T58434	1.01	4.53	4.49	2.26	6.17	5.02	2
1003	257312	N29624	0.36	1.60	4.48	0.90	6.98	5.57	2
1004	1048899	AA778562	0.07	0.32	4.48	1.56	5.09	6.78	2
1005	51700	H22854	0.24	1.09	4.47	6.45	5.25	1.71	2
1006	1466599	AA883660	0.12	0.53	4.46	1.21	6.24	5.93	2
1007	51328	H20743	0.01	0.06	4.44	2.31	5.02	5.98	2
1008	1504005	AA904776	0.11	0.49	4.44	1.72	5.71	5.87	2

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1009	194811	R89765	0.42	1.88	4.42	0.87	5.63	6.76	2
1010	126239	R06372	0.02	0.08	4.42	5.24	2.84	5.17	2
1011	726858	AA398355	1.71	7.57	4.42	7.74	0.22	5.29	2
1012	110772	T90821	13.07	57.53	4.40	2.19	5.60	5.41	2
1013	758302	AA404338	0.03	0.14	4.39	6.57	0.31	6.30	2
1014	530545	AA112978	0.19	0.84	4.38	2.44	5.46	5.23	2
1015	1461715	AA884382	0.17	0.73	4.35	2.38	5.14	5.54	2
1016	745523	AA626247	0.09	0.40	4.35	1.74	6.04	5.26	2
1017	744911	AA625791	0.10	0.42	4.34	1.92	5.25	5.86	2
1018	784589	AA443300	0.02	0.10	4.33	5.57	6.96	0.44	2
1019	647816	AA205320	0.25	1.07	4.32	0.99	5.51	6.47	2
1020	80946	T70122	5.27	22.74	4.32	1.50	5.60	5.84	2
1021	757463	AA437245	0.09	0.39	4.28	1.45	5.78	5.62	2
1022	45514	H08227	0.06	0.27	4.28	1.28	5.77	5.79	2
1023	280909	N50828	1.43	6.07	4.25	1.08	5.61	6.07	2
1024	814906	AA465692	2.68	11.37	4.24	1.91	5.44	5.36	2
1025	272238	N35579	2.10	8.82	4.19	1.25	5.55	5.76	2
1026	42400	R60949	1.37	5.73	4.17	5.58	1.07	5.87	2
1027	281103	N50935	2.75	11.43	4.16	1.40	5.50	5.58	2
1028	1466824	AA883755	0.09	0.36	4.16	1.38	5.73	5.36	2
1029	505997	AA708431	0.41	1.69	4.14	5.38	1.63	5.41	2
1030	841287	AA487206	2.36	9.76	4.13	0.84	6.05	5.49	2
1031	126695	R07012	0.14	0.57	4.12	1.58	5.14	5.65	2
1032	858292	AA633993	2.38	9.78	4.10	0.57	5.73	6.01	2
1033	1469211	AA862814	0.20	0.83	4.09	1.23	5.12	5.93	2
1034	73659	T54527	1.12	4.55	4.08	0.97	5.71	5.55	2
1035	79726	T62552	1.04	4.25	4.08	5.88	5.23	1.12	2
1036	292388	N79230	1.82	7.30	4.01	5.25	1.78	5.01	2
1037	239661	H79566	0.02	0.07	3.92	5.37	5.82	0.56	2
1038	882483	AA676598	2.77	10.81	3.91	1.13	5.04	5.58	2
1039	249517	H84915	0.76	2.97	3.90	1.12	5.12	5.46	2
1040	247587	N58136	0.02	0.09	3.90	5.46	5.69	0.55	2
1041	193420	H47089	0.40	1.56	3.87	1.01	5.60	5.01	2
1042	487141	AA045340	1.95	7.56	3.87	0.43	5.56	5.63	2
1043	260168	N32071	0.01	12.21	1221.36	0.55	3660.91	2.63	1



Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1044	280291	N47961	0.01	5.59	559.28	1.63	1675.21	1.00	1
1045	307328	N93470	0.02	7.11	421.73	1.71	1262.88	0.59	1
1046	279613	N48913	0.39	158.35	411.27	0.98	1231.52	1.33	1
1047	268115	N30131	0.01	2.55	254.59	1.49	761.20	1.09	1
1048	124567	R01937	0.01	2.45	244.61	2.76	730.07	1.00	1
1049	327495	W20486	0.01	2.38	237.81	2.72	708.49	2.22	1
1050	785337	AA476502	0.01	2.19	219.32	2.43	652.56	2.96	1
1051	840937	AA486538	0.01	1.97	197.29	2.91	586.88	2.07	1
1052	1325605	AA875888	0.04	6.87	172.23	0.55	515.39	0.74	1
1053	784116	AA432058	0.04	6.56	154.17	1.62	458.06	2.83	1
1054	796350	AA456130	0.49	73.56	149.45	0.82	446.45	1.09	1
1055	743027	AA406070	0.34	49.37	146.97	1.13	438.73	1.04	1
1056	742564	AA401342	0.78	69.16	88.80	1.24	264.42	0.74	1
1057	796334	AA461320	0.09	7.42	80.84	0.85	241.37	0.30	1
1058	769542	AA428212	0.05	3.61	75.00	1.50	221.03	2.47	1
1059	47963	H11642	0.12	8.93	74.54	1.79	220.07	1.77	1
1060	897722	AA598983	0.23	16.59	73.32	0.77	218.92	0.29	1
1061	270603	N33323	0.33	23.96	73.13	0.60	218.05	0.76	1
1062	726439	AA399245	0.02	1.43	72.56	2.48	214.82	0.38	1
1063	44007	H05961	0.04	2.83	72.19	2.70	212.83	1.04	1
1064	37986	R61395	0.01	0.65	64.60	1.54	191.25	1.00	1
1065	586845	AA133554	0.06	3.72	59.54	1.07	176.58	0.97	1
1066	427693	AA002166	0.35	20.73	59.22	1.25	175.32	1.10	1
1067	594683	AA171784	0.31	18.15	58.59	1.85	173.57	0.36	1
1068	49131	H16537	0.03	1.84	57.46	2.01	168.03	2.35	1
1069	782353	AA432278	0.26	14.22	55.03	1.13	162.70	1.26	1
1070	810959	AA459400	0.07	3.65	54.74	0.86	161.00	2.37	1
1071	838877	AA481806	0.09	4.65	51.74	0.97	153.57	0.68	1
1072	362278	AA001219	0.02	0.94	51.03	2.74	149.67	0.69	1
1073	1048794	AA621324	0.15	7.71	50.64	0.39	151.46	0.07	1
1074	193087	H47076	0.02	1.05	50.20	1.48	148.84	0.48	1
1075	360355	AA013353	0.19	9.24	48.61	0.82	143.96	1.06	1
1076	726934	AA398384	0.70	32.83	46.77	2.69	135.65	1.96	1
1077	796723	AA443140	0.03	1.25	46.43	3.00	135.09	1.21	1
1078	838600	AA456951	0.27	12.55	46.12	0.95	137.23	0.19	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1079	344834	W70264	0.02	0.77	44.22	1.23	130.86	0.57	1
1080	271141	N34482	0.03	1.29	43.90	0.79	128.29	2.63	1
1081	773209	AA425743	0.48	21.09	43.69	1.18	129.35	0.54	1
1082	625516	AA187595	0.02	0.63	41.89	0.47	122.87	2.32	1
1083	46055	H08650	0.11	4.73	41.59	122.01	1.33	1.42	1
1084	416808	W86779	1.03	42.43	41.07	0.72	122.05	0.44	1
1085	323251	W42996	0.10	4.04	40.88	0.41	120.12	2.13	1
1086	284701	N64840	0.39	15.59	40.15	118.16	1.22	1.07	1
1087	255659	N27641	0.04	1.72	40.03	1.06	117.01	2.03	1
1088	268979	N26083	0.58	23.11	39.71	1.18	117.08	0.87	1
1089	51799	H23524	0.36	14.33	39.51	118.37	0.03	0.13	1
1090	417760	W88720	0.28	10.92	39.20	1.76	114.00	1.83	1
1091	609436	AA180453	0.78	30.27	38.61	1.15	113.82	0.84	1
1092	838853	AA481788	2.21	82.43	37.26	0.85	110.55	0.39	1
1093	276905	N34943	0.06	2.07	36.82	0.97	109.30	0.18	1
1094	897262	AA677643	0.36	13.35	36.69	0.73	1.02	108.31	1
1095	810459	AA457138	0.45	16.34	36.32	0.68	106.62	1.65	1
1096	128461	R10140	0.05	1.94	36.21	0.12	106.86	1.65	1
1097	254545	N23865	0.30	10.68	35.93	1.55	104.16	2.06	1
1098	279176	N46845	0.39	13.40	34.13	1.05	99.56	1.78	1
1099	284408	N52158	0.01	0.34	33.51	1.40	98.13	1.00	1
1100	204686	H57136	0.01	0.32	32.37	1.00	1.00	95.10	1
1101	785866	AA449300	0.01	0.32	31.55	1.86	90.43	2.37	1
1102	282161	N48271	1.19	37.35	31.48	1.16	92.44	0.86	1
1103	592403	AA159497	0.01	0.31	31.48	2.74	90.70	1.00	1
1104	526567	AA128407	0.04	1.21	31.06	1.08	91.71	0.39	1
1105	452848	AA704816	0.18	5.31	28.99	1.73	84.23	1.00	1
1106	329059	W43028	0.06	1.64	28.51	2.92	82.35	0.25	1
1107	564231	AA121387	0.02	0.63	28.14	2.11	79.62	2.69	1
1108	1323328	AA872602	0.01	0.36	27.29	2.21	78.91	0.76	1
1109	285581	N68454	0.92	25.14	27.26	1.10	79.11	1.56	1
1110	27152	R37289	0.20	5.54	27.13	1.24	79.32	0.82	1
1111	773678	AA433910	0.07	1.91	27.12	1.91	76.73	2.73	1
1112	1323448	AA873604	0.48	12.79	26.76	1.43	1.76	77.08	1
1113	813654	AA47751	0.09	2.37	26.59	1.74	76.96	1.06	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostate Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1114	970901	AA776041	1.02	26.72	26.31	1.00	75.29	2.63	1
1115	299603	N74889	1.29	33.43	25.93	2.60	73.65	1.55	1
1116	27544	R40057	0.01	0.26	25.76	1.21	73.28	2.80	1
1117	767739	AA418028	0.15	3.89	25.55	0.75	74.73	1.17	1
1118	773293	AA425214	0.09	2.31	25.16	0.29	74.38	0.80	1
1119	731115	AA417280	0.37	9.24	25.13	1.28	72.44	1.68	1
1120	48363	H15050	0.18	4.63	25.02	1.92	70.67	2.46	1
1121	38260	R49462	0.22	5.49	24.82	1.38	71.10	2.00	1
1122	251961	H97508	2.40	59.39	24.72	0.41	71.45	2.30	1
1123	285682	N67571	0.65	16.06	24.67	1.19	71.41	1.42	1
1124	284569	N64774	0.01	0.25	24.66	2.32	70.65	1.00	1
1125	784154	AA432096	0.03	0.84	24.57	0.29	71.20	2.23	1
1126	1466893	AA884321	0.44	10.63	24.27	2.54	68.08	2.18	1
1127	127711	R09504	1.57	37.42	23.82	1.01	69.82	0.64	1
1128	429660	AA011570	0.44	10.35	23.68	1.52	68.34	1.17	1
1129	364454	AA022668	0.53	12.38	23.36	1.28	67.64	1.17	1
1130	757235	AA426030	1.21	27.72	22.90	1.35	64.57	2.77	1
1131	731154	AA417211	0.28	6.49	22.78	1.39	65.48	1.45	1
1132	823796	AA490264	0.42	9.38	22.60	0.83	66.20	0.77	1
1133	196475	R92512	0.10	2.19	22.38	1.64	65.41	0.10	1
1134	742890	AA406220	0.64	14.30	22.28	1.16	64.81	0.87	1
1135	285364	N66346	0.77	17.18	22.23	0.97	64.73	0.97	1
1136	328745	W45403	0.04	0.81	22.20	0.70	63.34	2.57	1
1137	273024	N36389	0.38	8.49	22.17	0.84	64.28	1.38	1
1138	344747	W74696	0.19	4.05	21.69	1.59	62.07	1.40	1
1139	730377	AA470073	0.59	12.75	21.68	1.18	63.23	0.63	1
1140	253534	H89563	1.42	29.99	21.17	0.56	62.26	0.68	1
1141	289865	N62079	0.51	10.68	20.87	1.21	59.72	1.70	1
1142	502593	AA136049	0.01	0.18	20.81	1.29	2.06	59.09	1
1143	38244	R49436	0.08	1.66	20.63	1.10	60.67	0.12	1
1144	33045	R19478	0.15	3.00	20.35	1.33	58.64	1.09	1
1145	37901	R59304	0.27	5.45	20.32	0.81	59.31	0.84	1
1146	1466551	AA885141	0.25	5.04	19.89	0.96	56.55	2.16	1
1147	259865	N29851	0.64	12.57	19.79	1.44	57.49	0.46	1
1148	306841	N91921	0.60	11.90	19.67	1.24	57.17	0.59	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1149	525478	AA065042	0.01	0.19	19.20	1.00	55.61	1.00	1
1150	609209	AA167120	0.44	8.40	19.11	1.56	53.79	1.97	1
1151	344618	W74725	0.01	0.19	19.00	1.10	1.00	54.90	1
1152	731016	AA421256	0.01	0.19	18.85	2.52	53.32	0.71	1
1153	109275	T80832	0.65	12.10	18.68	0.98	54.30	0.76	1
1154	32551	R43189	0.03	0.48	18.29	0.36	54.14	0.38	1
1155	1461725	AA884397	0.83	14.96	18.05	0.31	53.43	0.41	1
1156	1342650	AA725397	0.13	2.32	18.02	1.27	51.75	1.04	1
1157	262060	H99075	0.98	17.51	17.94	0.55	51.86	1.41	1
1158	743828	AA634379	0.40	7.11	17.66	50.03	1.71	1.23	1
1159	1048694	AA620607	0.39	6.75	17.52	1.35	49.38	1.83	1
1160	626186	AA188710	0.08	1.37	17.44	2.13	49.70	0.50	1
1161	745330	AA625641	0.18	3.05	17.28	0.40	50.90	0.53	1
1162	767449	AA418000	0.47	8.13	17.25	49.43	0.87	1.45	1
1163	451871	AA706935	0.11	1.84	17.14	0.80	48.99	1.64	1
1164	42225	R60731	0.36	6.13	17.05	1.89	46.96	2.29	1
1165	31869	R43017	0.10	1.60	16.83	0.36	49.51	0.63	1
1166	1468260	AA884926	0.35	5.82	16.65	45.76	1.50	2.70	1
1167	281003	N50880	0.22	3.57	16.52	48.82	0.05	0.69	1
1168	731422	AA412403	0.37	6.03	16.52	1.51	46.45	1.59	1
1169	279102	N51709	0.32	5.21	16.51	1.72	45.77	2.06	1
1170	261989	H98676	0.23	3.70	16.42	0.92	46.79	1.55	1
1171	1030808	AA620301	0.68	11.22	16.40	1.01	47.42	0.77	1
1172	137853	R68409	0.31	4.98	16.18	1.38	46.41	0.74	1
1173	276438	NA0202	0.91	14.63	16.13	1.23	46.01	1.16	1
1174	627401	AA180825	0.10	1.63	16.07	1.38	46.29	0.53	1
1175	38677	R51506	0.27	4.23	15.67	0.93	44.76	1.30	1
1176	768445	AA495938	0.35	5.43	15.59	1.31	42.94	2.52	1
1177	299162	N75473	0.01	0.16	15.56	1.32	1.00	44.37	1
1178	1626197	AI005321	0.18	2.75	15.49	1.79	42.61	2.06	1
1179	285370	N66348	0.55	8.40	15.37	1.18	43.72	1.23	1
1180	323599	W44338	0.50	7.61	15.30	2.79	42.03	1.07	1
1181	1412504	AA845168	0.25	3.82	15.28	1.07	44.40	0.38	1
1182	731091	AA421170	0.56	8.56	15.26	1.08	43.90	0.79	1
1183	549157	AA083514	0.85	12.92	15.12	1.48	42.90	0.97	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1184	1388373	AA844124	0.33	5.05	15.11	0.85	43.54	0.94	1
1185	731444	AA412435	0.50	7.34	14.83	1.04	42.32	1.13	1
1186	30986	R41782	0.27	4.03	14.76	1.17	41.82	1.29	1
1187	279616	N48302	0.58	8.55	14.65	1.26	42.02	0.68	1
1188	280270	N47954	0.53	7.71	14.55	1.33	40.40	1.92	1
1189	1474149	AA911971	0.02	0.34	14.54	2.10	41.08	0.42	1
1190	80242	T64323	1.49	21.55	14.50	1.51	41.04	0.95	1
1191	562080	AA211483	0.05	0.78	14.36	0.98	40.96	1.16	1
1192	450375	AA703660	0.13	1.87	14.30	1.45	41.37	0.08	1
1193	784242	AA446882	0.59	8.37	14.22	0.76	41.22	0.67	1
1194	25933	R36969	0.01	0.14	13.99	2.13	1.37	38.45	1
1195	42433	R61189	0.15	2.05	13.98	1.19	39.26	1.48	1
1196	45501	H08397	0.09	1.31	13.90	40.60	0.11	0.99	1
1197	811819	AA463483	0.58	8.10	13.87	0.91	39.18	1.53	1
1198	284845	N66724	0.77	10.61	13.85	1.22	39.02	1.31	1
1199	744417	AA621218	0.01	0.14	13.84	2.64	2.34	36.52	1
1200	328689	W45330	0.70	9.64	13.79	1.10	39.01	1.27	1
1201	342089	W60894	1.08	14.87	13.73	0.91	39.43	0.85	1
1202	38015	R61556	0.17	2.31	13.67	0.69	39.92	0.39	1
1203	810511	AA464541	1.09	14.75	13.59	1.51	36.40	2.87	1
1204	262968	H99722	0.62	8.43	13.52	0.89	38.96	0.71	1
1205	549035	AA083207	0.21	2.77	13.50	0.86	39.39	0.25	1
1206	612782	AA181723	0.57	7.69	13.50	0.89	38.18	1.42	1
1207	730888	AA417031	0.95	12.65	13.37	0.86	38.68	0.57	1
1208	34901	R45114	0.27	3.60	13.37	1.42	38.10	0.57	1
1209	243410	N38992	0.90	12.03	13.35	1.22	38.03	0.79	1
1210	730398	AA469939	1.01	13.46	13.30	0.95	38.31	0.65	1
1211	592778	AA158211	0.02	0.26	13.29	2.26	35.14	2.46	1
1212	730827	AA417017	0.50	6.68	13.27	1.42	37.10	1.29	1
1213	283045	N51290	0.59	7.81	13.26	0.73	38.34	0.72	1
1214	798130	AA460967	0.34	4.53	13.22	1.19	37.93	0.53	1
1215	591814	AA143467	0.09	1.19	13.15	0.42	38.93	0.11	1
1216	308031	N92310	0.22	2.89	13.01	1.76	35.65	1.60	1
1217	742666	AA400273	1.08	14.04	12.99	1.47	36.87	0.65	1
1218	1032072	AA609887	0.55	7.09	12.96	1.33	36.05	1.51	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1219	415820	W84815	0.63	8.15	12.91	0.97	36.14	1.62	1
1220	358046	W94591	0.52	6.66	12.84	1.34	36.21	0.98	1
1221	80186	T64192	1.07	13.65	12.78	1.20	36.50	0.65	1
1222	454317	AA677165	0.33	4.20	12.72	35.38	1.48	1.30	1
1223	768111	AA418988	0.67	8.45	12.60	1.20	35.01	1.58	1
1224	299024	N75394	0.46	5.81	12.58	1.04	35.31	1.39	1
1225	510136	AA053239	0.01	0.13	12.52	1.00	35.57	1.00	1
1226	41300	R56842	0.21	2.68	12.49	0.99	35.21	1.26	1
1227	278629	N66203	0.49	6.06	12.49	1.77	33.25	2.43	1
1228	1466883	AA884317	0.67	8.34	12.47	1.55	35.13	0.71	1
1229	208413	H62162	0.32	3.96	12.44	35.07	1.49	0.76	1
1230	762279	AA431750	0.52	6.39	12.37	1.54	34.77	0.79	1
1231	296448	N74623	0.02	0.19	12.35	0.66	0.66	35.74	1
1232	511233	AA088701	0.18	2.21	12.29	1.20	34.01	1.66	1
1233	359040	W92278	0.83	10.12	12.20	0.77	34.90	0.95	1
1234	366795	AA029428	0.48	5.89	12.16	1.40	33.59	1.50	1
1235	588159	AA135222	1.78	21.58	12.10	2.01	32.82	1.46	1
1236	742671	AA400281	0.65	7.77	12.04	1.11	33.72	1.28	1
1237	1031375	AA609138	0.66	7.93	11.98	0.97	34.33	0.64	1
1238	129862	R17096	0.01	0.12	11.96	1.00	2.56	32.33	1
1239	813697	AA453769	0.80	9.57	11.96	0.87	33.75	1.25	1
1240	625684	AA186335	0.87	10.22	11.73	0.82	33.81	0.58	1
1241	289594	N62780	1.35	15.85	11.70	1.91	32.40	0.80	1
1242	203488	H55955	0.08	0.90	11.63	1.22	32.62	1.06	1
1243	785788	AA449745	0.29	3.36	11.63	0.78	32.51	1.61	1
1244	346615	W74471	0.30	3.53	11.62	1.68	31.51	1.68	1
1245	1456160	AA862465	0.23	2.61	11.47	33.19	0.28	0.95	1
1246	433350	AA700604	6.42	73.54	11.46	31.50	1.22	1.66	1
1247	112559	T91244	0.30	3.38	11.38	1.20	32.53	0.40	1
1248	753368	AA411682	0.18	2.02	11.35	0.58	33.21	0.27	1
1249	264449	N21233	0.04	0.41	11.26	1.70	30.58	1.51	1
1250	786073	AA448672	0.66	7.40	11.26	1.20	31.68	0.90	1
1251	221828	H92234	0.06	0.68	11.23	2.84	29.73	1.13	1
1252	384015	AA702640	0.36	4.08	11.23	32.54	0.83	0.32	1
1253	730344	AA469922	0.48	5.33	11.16	1.35	30.72	1.42	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1254	258063	N30328	0.87	9.68	11.15	1.11	31.28	1.05	1
1255	627292	AA191495	0.07	0.79	11.09	1.32	30.94	0.99	1
1256	626462	AA188999	1.08	11.98	11.08	1.26	31.46	0.52	1
1257	823618	AA496949	0.66	7.28	11.05	0.91	31.48	0.76	1
1258	270274	N33550	0.32	3.51	11.04	1.23	31.25	0.63	1
1259	28774	R40244	0.14	1.56	11.00	1.13	31.52	0.36	1
1260	50582	H17038	0.30	3.26	10.99	0.83	31.48	0.67	1
1261	31478	R42763	0.24	2.62	10.95	0.80	29.45	2.58	1
1262	83358	T68445	1.46	15.93	10.89	30.68	1.01	0.98	1
1263	289725	N59278	0.83	9.08	10.89	0.97	30.86	0.84	1
1264	262313	H99460	0.46	5.00	10.76	0.81	29.68	1.80	1
1265	29251	R41389	0.12	1.34	10.75	1.66	29.36	1.25	1
1266	280413	N47214	0.51	5.45	10.74	0.92	29.74	1.56	1
1267	811785	AA463463	0.24	2.56	10.70	1.06	29.70	1.34	1
1268	44387	H06525	0.25	2.63	10.68	2.06	0.06	29.91	1
1269	38517	R51236	0.11	1.13	10.62	0.73	31.04	0.09	1
1270	742616	AA401482	0.40	4.27	10.60	1.65	29.17	0.97	1
1271	629968	AA219315	0.24	2.53	10.52	0.75	30.56	0.24	1
1272	35308	R45402	0.45	4.74	10.45	1.01	29.08	1.26	1
1273	687579	AA236561	0.67	6.94	10.41	1.26	29.40	0.56	1
1274	784177	AA446658	1.77	18.36	10.40	1.13	28.01	2.05	1
1275	730294	AA412512	0.33	3.36	10.32	1.20	28.15	1.60	1
1276	1466549	AA885140	0.44	4.50	10.26	1.12	28.46	1.20	1
1277	72663	T50397	0.01	0.10	10.26	1.20	28.58	1.00	1
1278	795723	AA460289	0.34	3.44	10.24	1.33	28.32	1.07	1
1279	773423	AA426038	0.15	1.53	10.20	0.52	29.62	0.45	1
1280	795170	AA453466	0.42	4.33	10.20	1.31	28.06	1.21	1
1281	282000	N51107	1.38	14.09	10.19	1.38	28.36	0.82	1
1282	743519	AA609415	0.53	5.32	10.01	1.20	27.58	1.26	1
1283	898038	AA598943	0.35	3.47	10.00	1.65	26.99	1.36	1
1284	364950	AA024459	0.60	6.03	9.97	1.33	27.67	0.90	1
1285	44303	H06380	0.73	7.21	9.92	1.63	26.24	1.89	1
1286	251685	H96738	0.46	4.57	9.87	0.49	28.25	0.88	1
1287	344010	W70242	0.67	6.60	9.84	1.03	28.16	2.33	1
1288	795540	AA459652	0.45	4.44	9.84	1.30	27.33	0.90	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1289	121633	T97599	1.25	12.27	9.82	1.16	27.36	0.95	1
1290	347020	W79499	0.55	5.41	9.80	1.15	27.43	0.81	1
1291	1325751	AA873089	0.56	5.49	9.76	1.25	26.98	1.04	1
1292	742874	AA406213	0.76	7.41	9.75	1.14	27.37	0.73	1
1293	283619	N52876	0.50	4.86	9.73	1.02	27.09	1.08	1
1294	47793	H11730	0.18	1.71	9.69	1.83	0.40	26.83	1
1295	201931	H52446	0.16	1.53	9.66	1.01	26.66	1.31	1
1296	43422	H05626	0.16	1.56	9.55	0.74	27.97	0.24	1
1297	253314	H89331	0.71	6.78	9.61	1.31	26.48	1.05	1
1298	781506	AA432141	0.52	4.97	9.56	1.25	26.99	0.43	1
1299	647397	AA199717	1.00	9.52	9.55	2.24	24.20	2.20	1
1300	43072	R61871	0.50	4.77	9.52	0.87	26.65	1.03	1
1301	491565	AA115076	3.49	33.20	9.51	2.58	2.81	23.15	1
1302	796398	AA459941	0.36	3.37	9.40	24.67	2.59	0.93	1
1303	299347	N70654	0.71	6.72	9.40	1.17	26.29	0.74	1
1304	51806	H23555	0.08	0.72	9.38	2.22	23.30	2.61	1
1305	26844	R39901	0.18	1.69	9.34	1.48	23.87	2.67	1
1306	43815	H05741	0.10	0.94	9.34	0.68	27.22	0.12	1
1307	84141	T71042	0.01	0.09	9.32	1.90	1.00	25.05	1
1308	502664	AA127069	0.82	7.66	9.28	0.96	24.01	2.88	1
1309	1292207	AA705858	0.15	1.40	9.28	1.03	25.00	1.80	1
1310	343871	W69649	0.02	0.19	9.26	1.55	25.75	0.49	1
1311	67397	T49325	0.01	0.09	9.22	1.00	25.66	1.00	1
1312	346642	W74633	0.33	3.06	9.20	1.38	25.56	0.65	1
1313	399319	AA774645	0.26	2.38	9.14	1.09	24.09	2.23	1
1314	272288	N35603	0.40	3.63	9.07	1.18	24.82	1.22	1
1315	29424	R41357	0.37	3.37	9.00	1.07	24.08	1.86	1
1316	757265	AA426113	2.19	19.69	8.99	22.82	2.38	1.78	1
1317	811050	AA485429	0.10	0.91	8.99	1.61	23.59	1.78	1
1318	257608	N27272	0.71	6.33	8.97	1.04	24.68	1.18	1
1319	839903	AA490058	0.05	0.48	8.96	1.57	24.09	1.23	1
1320	343977	W70074	0.43	3.83	8.96	0.96	24.14	1.79	1
1321	757352	AA437107	1.00	8.93	8.93	0.81	25.33	0.66	1
1322	502527	AA156873	0.10	0.87	8.91	0.35	23.64	2.72	1
1323	471859	AA035144	0.01	0.07	8.87	1.26	24.08	1.26	1



Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1324	796448	AA459983	0.04	0.37	8.82	1.28	23.71	1.47	1
1325	45578	H07920	0.26	2.31	8.75	2.26	21.71	2.29	1
1326	530814	AA070226	1.22	10.67	8.72	22.34	2.00	1.83	1
1327	278809	N65580	1.31	11.41	8.70	0.22	25.76	0.13	1
1328	782575	AA447522	0.58	5.00	8.69	0.91	0.02	25.13	1
1329	969568	AA772803	0.09	0.78	8.69	2.33	21.36	2.36	1
1330	796408	AA459945	0.09	0.78	8.67	0.13	24.92	0.95	1
1331	898162	AA598538	3.55	30.73	8.65	1.27	0.53	24.14	1
1332	786550	AA452125	0.42	3.60	8.64	0.83	23.05	2.05	1
1333	448379	AA778206	0.45	3.84	8.54	0.90	24.06	0.67	1
1334	773276	AA425319	0.32	2.73	8.52	1.00	23.01	1.55	1
1335	53371	R15779	0.11	0.89	8.50	1.79	21.50	2.22	1
1336	284479	N52350	0.04	0.30	8.50	0.49	0.28	24.73	1
1337	1372140	AA974495	4.41	37.45	8.50	2.69	20.01	2.79	1
1338	37283	R51064	0.23	1.91	8.48	1.21	22.84	1.38	1
1339	774751	AA442095	1.04	8.81	8.46	0.57	1.42	23.39	1
1340	324122	W46577	0.42	3.53	8.45	1.56	22.84	0.94	1
1341	811845	AA463643	0.44	3.73	8.44	0.84	23.77	0.70	1
1342	285261	N63153	2.41	20.33	8.43	0.63	22.41	2.24	1
1343	1376853	AA812996	0.35	2.92	8.41	1.45	20.90	2.88	1
1344	613070	AA181646	2.03	17.03	8.40	0.60	23.97	0.62	1
1345	726699	AA398262	0.24	2.03	8.39	1.21	23.00	0.97	1
1346	31056	R42490	0.23	1.94	8.38	1.38	23.12	0.65	1
1347	509495	AA047338	2.23	18.69	8.38	1.99	2.77	20.37	1
1348	1466418	AA885471	0.47	3.93	8.34	0.24	24.31	0.47	1
1349	448014	AA702785	0.17	1.42	8.31	0.78	23.22	0.94	1
1350	291129	N72150	0.33	2.74	8.29	0.34	24.02	0.50	1
1351	340898	W57712	1.23	10.19	8.28	2.68	19.19	2.96	1
1352	284220	N53534	0.29	2.38	8.24	1.18	22.37	1.19	1
1353	782847	AA448283	0.53	4.33	8.21	1.14	22.28	1.22	1
1354	450574	AA704255	1.05	8.62	8.21	0.80	23.03	0.80	1
1355	35503	R45672	0.22	1.81	8.20	1.45	21.45	1.71	1
1356	32381	R43452	0.28	2.30	8.20	22.17	1.81	0.62	1
1357	731337	AA416782	0.42	3.42	8.16	1.13	21.62	1.74	1
1358	1461664	AA885311	1.34	10.88	8.15	2.95	0.15	21.36	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostate Epithelial Cell Line Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1359	786504	AA452095	2.20	17.90	8.15	2.90	0.49	21.07	1
1360	743992	AA629020	0.36	2.94	8.11	1.08	1.49	21.75	1
1361	742702	AA401380	0.24	1.93	8.07	1.00	22.43	0.77	1
1362	341861	W60795	0.45	3.62	8.03	1.35	21.23	1.51	1
1363	595318	AA164301	0.57	4.55	8.03	1.14	20.14	2.80	1
1364	788629	AA449823	0.05	0.40	8.02	1.92	19.87	2.29	1
1365	781404	AA430202	0.35	2.83	8.01	0.90	22.05	1.07	1
1366	49836	H29207	0.57	4.52	7.98	1.66	21.87	0.42	1
1367	42009	R60713	0.03	0.25	7.97	2.14	20.92	0.85	1
1368	34641	R44404	0.19	1.55	7.96	0.99	22.36	0.53	1
1369	286861	N67891	0.65	5.16	7.96	1.05	21.01	1.82	1
1370	230591	H75459	0.52	4.12	7.96	20.12	1.68	2.07	1
1371	283158	N51343	1.40	11.10	7.95	1.35	21.75	0.74	1
1372	843058	AA488604	0.15	1.17	7.92	0.77	22.04	0.96	1
1373	1031919	AA609749	1.09	8.58	7.85	1.33	20.70	1.52	1
1374	280213	N49186	0.74	5.83	7.83	1.09	21.42	0.97	1
1375	757257	AA426092	0.23	1.78	7.77	0.65	21.62	1.05	1
1376	280266	N47952	0.53	4.12	7.74	0.73	21.04	1.44	1
1377	1030781	AA609005	0.90	6.90	7.71	1.21	20.67	1.23	1
1378	786669	AA451890	0.87	5.09	7.63	1.43	20.64	0.82	1
1379	69272	T54342	0.01	0.08	7.62	0.56	21.29	1.00	1
1380	772408	AA405532	1.49	11.32	7.60	1.33	20.21	1.27	1
1381	784272	AA447476	0.14	1.07	7.56	1.39	19.58	1.72	1
1382	278516	N62817	0.56	4.20	7.56	0.99	20.96	0.71	1
1383	416158	W85931	0.80	6.05	7.55	0.56	21.62	0.48	1
1384	511117	AA088231	0.06	0.46	7.54	2.35	18.03	2.23	1
1385	283874	N52589	0.10	0.79	7.53	1.68	18.23	2.69	1
1386	746321	AA481397	0.44	3.30	7.49	0.67	1.28	20.54	1
1387	129392	R11236	0.05	0.41	7.48	1.30	1.87	19.28	1
1388	40296	R52082	0.84	6.24	7.41	1.45	1.27	19.52	1
1389	245768	N5266	0.01	0.10	7.41	0.76	0.44	21.03	1
1390	595695	AA173189	3.54	26.15	7.38	1.82	0.14	20.18	1
1391	852829	AA668178	0.01	0.07	7.35	2.78	1.00	18.26	1
1392	795199	AA453585	0.54	3.92	7.33	0.66	20.91	0.41	1
1393	626551	AA187982	0.48	3.50	7.31	1.32	18.62	2.00	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1394	823772	AA490240	0.19	1.40	7.31	1.72	18.94	1.25	1
1395	1049293	AA620760	0.43	3.14	7.28	1.18	19.21	1.44	1
1396	277322	N57475	0.31	2.27	7.27	1.76	18.29	1.76	1
1397	42387	R59990	0.20	1.44	7.26	1.12	19.38	1.29	1
1398	307174	N91797	1.14	8.29	7.25	1.22	19.82	0.69	1
1399	417296	W88786	1.03	7.41	7.17	0.92	20.04	0.54	1
1400	399152	AA733105	0.09	0.63	7.15	0.64	19.41	1.40	1
1401	503583	AA131240	0.58	4.11	7.14	1.07	19.54	0.81	1
1402	284651	N64814	0.26	1.86	7.12	2.96	16.61	1.79	1
1403	345081	W74802	0.19	1.32	7.12	20.99	0.29	0.08	1
1404	415814	W84778	0.21	1.50	7.11	16.41	2.76	2.15	1
1405	754008	AA478965	0.25	1.74	7.08	0.51	19.69	1.05	1
1406	39161	R51865	0.22	1.59	7.07	1.30	18.84	1.08	1
1407	277974	N63436	0.10	0.70	7.04	1.41	18.55	1.15	1
1408	729954	AA412046	0.91	6.35	7.00	0.96	19.09	0.95	1
1409	813735	AA453785	0.36	2.53	6.97	0.62	18.94	1.36	1
1410	796442	AA459980	2.01	13.98	6.97	18.11	0.81	1.98	1
1411	626842	AA191424	0.44	3.06	6.94	16.68	2.00	2.14	1
1412	281936	N51069	0.98	6.77	6.93	1.05	18.56	1.19	1
1413	291790	N67861	6.24	43.23	6.93	1.55	0.20	19.02	1
1414	838818	AA457675	0.35	2.38	6.90	1.44	17.91	1.36	1
1415	781489	AA432144	0.45	3.11	6.90	1.16	17.72	1.82	1
1416	283703	N50733	0.56	3.88	6.90	1.39	18.47	0.84	1
1417	39266	R51872	0.10	0.66	6.90	1.01	18.92	0.76	1
1418	590120	AA156022	0.68	4.70	6.89	1.06	18.61	0.99	1
1419	27508	R40037	0.24	1.65	6.88	1.26	17.58	1.81	1
1420	730742	AA435988	0.75	5.14	6.87	0.90	19.11	0.59	1
1421	213634	H72107	0.85	5.80	6.83	1.64	17.15	1.70	1
1422	50618	H17516	0.28	1.93	6.83	1.21	18.38	0.89	1
1423	1030854	AA621750	0.72	4.90	6.81	1.04	18.44	0.93	1
1424	564847	AA129217	1.04	7.07	6.81	1.18	18.33	0.91	1
1425	302073	N89783	0.29	2.00	6.80	1.28	17.77	1.36	1
1426	730146	AA412477	0.43	2.92	6.80	0.39	19.47	0.55	1
1427	307660	N92901	0.65	4.43	6.80	0.67	17.89	1.84	1
1428	795334	AA454170	0.80	5.43	6.80	0.76	19.11	0.52	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1429	489572	AA101840	0.24	1.64	6.78	1.09	16.56	2.69	1
1430	68052	T52820	0.01	0.07	6.77	1.00	1.00	18.30	1
1431	593652	AA166703	0.10	0.71	6.77	0.97	18.08	1.24	1
1432	505227	AA142923	0.38	2.59	6.75	1.20	17.97	1.09	1
1433	257167	N30562	0.70	4.72	6.75	0.76	18.29	1.19	1
1434	795829	AA461507	0.84	5.68	6.74	1.07	18.42	0.74	1
1435	1412398	AA844998	0.38	2.58	6.73	0.92	18.56	0.73	1
1436	811046	AA485427	0.02	0.11	6.72	0.63	18.92	0.63	1
1437	1422424	AA827369	0.51	3.42	6.70	0.51	18.93	0.67	1
1438	781046	AA446451	7.77	51.77	6.66	1.79	0.83	17.37	1
1439	376040	AA040332	0.79	5.28	6.66	1.14	16.50	2.35	1
1440	260216	N32095	1.81	12.09	6.66	0.51	18.64	0.83	1
1441	788234	AA454080	0.81	5.41	6.65	0.86	18.31	0.76	1
1442	247862	N58276	0.52	3.47	6.63	1.27	18.25	0.38	1
1443	27333	R37079	0.18	1.22	6.62	1.84	16.69	1.34	1
1444	280308	N47075	0.27	1.82	6.60	1.26	15.70	2.84	1
1445	1048586	AA608856	2.91	19.16	6.59	1.72	0.22	17.84	1
1446	460398	AA677522	0.01	0.07	6.58	2.45	1.00	16.28	1
1447	727275	AA401695	0.35	2.30	6.56	0.85	17.83	1.02	1
1448	788240	AA454082	0.09	0.60	6.56	1.01	18.57	0.11	1
1449	341061	W58291	0.55	3.63	6.55	1.48	17.20	0.97	1
1450	1055144	AA621363	0.69	4.51	6.55	1.90	16.06	1.68	1
1451	796369	AA456148	1.37	8.94	6.54	1.12	18.17	0.34	1
1452	35620	R45632	0.21	1.36	6.53	1.39	17.90	0.30	1
1453	346897	W78168	0.48	3.15	6.53	0.81	18.01	0.76	1
1454	1461161	AA868038	0.48	3.12	6.52	16.55	1.51	1.50	1
1455	361656	W96273	0.28	1.81	6.52	2.01	2.64	14.90	1
1456	325182	W49619	0.64	4.15	6.51	1.28	17.38	0.87	1
1457	815051	AA465168	0.86	5.61	6.51	0.84	2.07	16.61	1
1458	1417935	AA878739	0.96	6.21	6.50	0.51	18.14	0.84	1
1459	384939	AA708686	0.28	1.84	6.48	1.01	17.01	1.43	1
1460	745493	AA625990	0.44	2.83	6.48	16.43	1.84	1.17	1
1461	38528	R51261	0.16	1.04	6.48	1.90	14.61	2.93	1
1462	809611	AA458487	0.01	0.04	6.48	0.87	17.11	1.44	1
1463	290162	N63286	1.54	9.86	6.41	1.53	14.87	2.84	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1464	505454	AA156433	1.28	8.15	6.39	1.42	16.90	0.86	1
1465	782838	AA448270	1.12	7.19	6.39	0.49	0.43	18.24	1
1466	731040	AA421271	0.30	1.88	6.37	1.80	15.24	2.08	1
1467	342039	W60288	0.57	3.64	6.35	1.27	16.26	1.53	1
1468	795254	AA453993	0.85	5.43	6.35	0.85	17.18	1.03	1
1469	487383	AA046705	1.96	12.45	6.34	1.25	16.71	1.08	1
1470	823578	AA497040	0.25	1.60	6.31	1.15	16.50	1.28	1
1471	743025	AA408069	1.15	7.26	6.29	0.65	16.91	1.31	1
1472	37404	R51100	0.23	1.45	6.28	1.76	15.30	1.79	1
1473	731198	AA417355	0.21	1.33	6.27	1.18	16.03	1.60	1
1474	303023	N91566	0.61	3.82	6.24	1.16	16.63	0.92	1
1475	786154	AA448855	0.48	2.98	6.22	0.99	16.75	0.94	1
1476	361587	AA016980	0.17	1.04	6.21	1.81	2.34	14.49	1
1477	727137	AA398757	1.15	7.16	6.20	0.84	17.00	0.78	1
1478	665033	AA184646	0.11	0.70	6.19	1.87	14.44	2.25	1
1479	461420	AA704943	0.41	2.50	6.17	15.37	1.89	1.26	1
1480	591540	AA158735	0.02	0.15	6.17	0.41	0.41	17.69	1
1481	731050	AA421276	0.99	6.12	6.15	1.25	16.18	1.04	1
1482	162734	H27545	0.18	1.11	6.15	15.27	1.11	2.06	1
1483	289903	N64597	0.81	4.98	6.14	1.14	15.91	1.39	1
1484	135900	R33609	1.42	8.74	6.14	1.63	2.30	14.49	1
1485	609530	AA180163	0.47	2.86	6.13	1.01	15.63	1.75	1
1486	782668	AA447574	0.34	2.08	6.11	1.81	15.22	1.30	1
1487	277631	N45983	0.50	3.06	6.11	1.07	16.26	1.00	1
1488	1569463	AA973927	1.82	11.09	6.09	13.75	1.73	2.80	1
1489	255286	N23882	0.14	0.87	6.08	0.71	17.19	0.35	1
1490	461965	AA779972	0.40	2.40	6.07	0.69	16.27	1.25	1
1491	742928	AA405181	0.48	2.91	6.07	1.59	15.36	1.25	1
1492	897641	AA496792	0.25	1.54	6.07	1.05	16.43	0.72	1
1493	1469857	AA865150	0.65	3.94	6.05	1.37	15.22	1.56	1
1494	770989	AA427404	0.03	0.16	6.05	0.85	2.37	14.92	1
1495	214624	H71242	0.52	3.17	6.05	2.52	14.36	1.26	1
1496	280214	N49181	1.02	6.12	6.01	1.92	13.20	2.90	1
1497	46715	H10011	0.27	1.59	6.00	2.75	1.81	13.42	1
1498	324345	W47585	0.01	0.06	5.98	1.76	15.18	1.00	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line. Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1499	838500	AA457528	0.34	2.05	5.98	1.18	15.89	0.86	1
1500	743184	AA401409	0.79	4.68	5.95	1.32	15.78	0.75	1
1501	268146	N21576	0.67	3.98	5.95	0.60	0.01	17.23	1
1502	772938	AA479928	0.36	2.17	5.95	1.28	16.22	0.34	1
1503	795339	AA453256	0.44	2.60	5.93	1.27	15.41	1.12	1
1504	878097	AA775405	0.25	1.49	5.93	0.77	14.53	2.48	1
1505	786107	AA448825	0.79	4.69	5.91	1.10	15.90	0.74	1
1506	85840	T72235	2.06	12.14	5.91	0.45	0.54	16.74	1
1507	1055727	AA628132	0.23	1.35	5.90	0.72	15.08	1.90	1
1508	51749	H24329	0.37	2.18	5.89	17.10	0.16	0.40	1
1509	767461	AA418004	0.36	2.11	5.88	1.67	13.14	2.85	1
1510	46183	H09616	0.04	0.21	5.88	2.42	14.95	0.28	1
1511	856388	AA774678	6.44	37.89	5.88	1.55	3.00	13.10	1
1512	298162	N70791	0.35	2.08	5.87	1.16	15.23	1.22	1
1513	586923	AA130955	1.18	6.90	5.87	0.79	15.93	0.88	1
1514	310054	N95476	1.04	6.10	5.87	1.30	15.63	0.67	1
1515	813807	AA447724	0.25	1.46	5.86	1.23	15.07	1.27	1
1516	184256	H43707	0.42	2.46	5.81	14.09	2.49	0.87	1
1517	1055636	AA620927	0.37	2.13	5.81	0.88	15.63	0.91	1
1518	279583	N48901	0.47	2.71	5.76	1.07	13.52	2.69	1
1519	277785	N49619	0.28	1.60	5.76	1.36	14.88	1.05	1
1520	28106	R40780	0.85	4.87	5.75	1.77	0.66	14.81	1
1521	417461	W88999	1.03	5.93	5.74	1.04	15.61	0.56	1
1522	254564	N23652	1.09	6.22	5.72	1.37	14.85	0.96	1
1523	757190	AA443958	4.29	24.55	5.72	0.26	16.15	0.77	1
1524	586796	AA133469	0.06	0.32	5.72	1.68	15.29	0.18	1
1525	270681	N33366	0.13	0.76	5.70	1.44	15.60	0.07	1
1526	283702	N50729	0.55	3.16	5.70	1.10	14.20	1.79	1
1527	840404	AA485653	4.80	27.34	5.69	1.08	2.35	13.64	1
1528	594806	AA171426	1.09	6.19	5.67	0.88	15.05	1.08	1
1529	251517	H96605	0.52	2.93	5.66	1.05	14.61	1.31	1
1530	797048	AA463225	0.41	2.33	5.65	1.01	13.08	2.88	1
1531	415191	W95118	0.57	3.19	5.63	2.86	11.46	2.58	1
1532	272951	N33778	0.01	0.06	5.61	1.00	1.00	14.84	1
1533	341095	W58209	0.52	2.90	5.59	1.11	14.64	1.04	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1534	898288	AA598975	0.18	1.02	5.59	1.31	14.07	1.39	1
1535	951102	AA620463	1.12	6.24	5.59	1.17	12.89	2.72	1
1536	281243	N51002	0.19	1.04	5.59	14.87	0.45	1.44	1
1537	44287	H06249	0.07	0.37	5.58	2.63	13.78	0.34	1
1538	758370	AA404356	0.40	2.21	5.58	1.89	14.42	0.43	1
1539	625616	AA186613	0.44	2.46	5.58	1.47	12.33	2.93	1
1540	358212	W95414	0.53	2.93	5.57	1.33	14.57	0.80	1
1541	898218	AA598601	1.30	7.23	5.56	2.92	2.90	10.87	1
1542	148469	H12338	0.08	0.42	5.56	13.10	1.81	1.76	1
1543	133864	R28660	0.12	0.65	5.55	1.63	14.66	0.34	1
1544	280633	N50432	1.05	5.82	5.54	0.90	15.17	0.54	1
1545	179753	H51549	0.01	0.06	5.53	1.11	1.00	14.48	1
1546	742589	AA401472	0.56	3.10	5.52	1.11	14.52	0.93	1
1547	742590	AA401470	0.03	0.16	5.52	1.82	12.03	2.71	1
1548	434845	AA703147	1.16	6.39	5.50	0.93	1.14	14.43	1
1549	344505	W73523	0.10	0.57	5.48	0.59	15.22	0.64	1
1550	1031552	AA609284	0.57	3.15	5.48	1.22	14.23	0.98	1
1551	121409	T96913	0.74	4.04	5.48	0.88	14.78	0.77	1
1552	45922	H09541	0.20	1.09	5.47	1.35	13.47	1.59	1
1553	358200	W95409	0.79	4.31	5.45	1.46	14.20	0.69	1
1554	415264	W92011	1.18	6.45	5.45	1.27	1.33	13.75	1
1555	203544	H56028	2.30	12.51	5.44	2.64	2.97	10.73	1
1556	782611	AA447547	0.07	0.40	5.44	2.49	13.71	0.14	1
1557	951101	AA620472	0.04	0.22	5.44	0.78	15.03	0.52	1
1558	306121	N90514	0.72	3.92	5.43	1.86	13.09	1.34	1
1559	429773	AA009763	0.05	0.25	5.42	1.92	14.13	0.22	1
1560	795585	AA459702	0.06	0.33	5.42	2.61	11.67	1.99	1
1561	27098	R36989	0.05	0.28	5.42	0.59	15.56	0.11	1
1562	795788	AA460328	0.01	0.03	5.41	12.59	1.81	1.81	1
1563	281756	N48078	0.86	4.66	5.39	1.04	14.19	0.95	1
1564	280672	N47425	0.58	3.15	5.39	1.04	14.02	1.12	1
1565	609052	AA176607	0.61	3.29	5.39	1.07	13.69	1.40	1
1566	645332	AA205803	0.40	2.17	5.39	2.60	12.04	1.52	1
1567	755904	AA496544	2.48	13.33	5.39	1.48	2.43	12.24	1
1568	240273	H89713	0.27	1.45	5.37	1.30	14.21	0.60	1

**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

1569	825583	AA504617	0.01	0.05	5.36	2.88	10.35	2.86	1
1570	127242	R08292	0.39	2.10	5.36	1.17	13.41	1.50	1
1571	462468	AA699895	0.25	1.33	5.34	13.49	1.23	1.31	1
1572	562158	AA211565	0.75	4.00	5.34	0.99	13.90	1.13	1
1573	270765	N29786	0.15	0.82	5.34	1.08	13.96	0.97	1
1574	742887	AA406226	0.42	2.21	5.32	1.04	14.31	0.61	1
1575	128058	R09729	1.29	6.86	5.32	0.65	0.18	15.12	1
1576	346359	W74216	0.90	4.78	5.31	0.68	14.89	0.38	1
1577	489535	AA098867	1.87	9.92	5.31	0.62	13.87	1.43	1
1578	297878	N70038	3.78	20.08	5.31	0.75	14.20	0.97	1
1579	840444	AA485714	0.82	4.34	5.31	0.50	14.65	0.76	1
1580	251591	H96643	0.03	0.18	5.31	0.30	1.66	13.96	1
1581	745072	AA626275	0.35	1.87	5.30	12.38	1.48	2.04	1
1582	378242	AA777024	2.14	11.30	5.29	1.37	13.86	0.63	1
1583	42120	R59618	0.39	2.08	5.29	0.85	14.51	0.49	1
1584	278386	N66085	1.09	5.76	5.28	2.04	11.84	1.96	1
1585	627306	AA191518	0.56	2.96	5.28	1.40	13.61	0.83	1
1586	124148	R01739	0.70	3.67	5.28	14.20	1.16	0.47	1
1587	757222	AA496149	0.66	3.47	5.28	14.23	0.22	1.38	1
1588	595623	AA167338	1.00	5.25	5.27	1.12	13.86	0.83	1
1589	743452	AA609368	0.84	4.41	5.25	1.10	13.60	1.05	1
1590	454698	AA677200	0.56	2.92	5.25	1.26	13.15	1.33	1
1591	280412	N47208	0.02	0.13	5.24	0.49	0.41	14.83	1
1592	360644	AA015819	1.79	9.37	5.24	0.59	13.78	1.34	1
1593	758309	AA404269	1.08	5.67	5.23	0.33	12.98	2.39	1
1594	462963	AA682439	0.43	2.23	5.23	1.88	12.77	1.04	1
1595	665154	AA195668	0.44	2.30	5.23	1.87	12.97	0.84	1
1596	592497	AA161466	0.22	1.16	5.22	0.13	15.02	0.51	1
1597	878417	AA670359	0.18	0.94	5.21	0.41	12.55	2.66	1
1598	462729	AA705184	0.48	2.50	5.20	1.26	11.43	2.91	1
1599	264157	N20602	0.11	0.56	5.20	0.63	14.87	0.09	1
1600	283890	N50787	0.52	2.70	5.19	1.54	12.74	1.28	1
1601	51011	H19242	0.70	3.62	5.18	14.21	0.93	0.40	1
1602	162533	H27986	2.59	13.39	5.18	1.16	12.97	1.40	1
1603	378435	AA039713	1.11	5.75	5.17	0.73	12.99	1.80	1



**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

1604	1475972	AA872979	0.27	1.38	5.17	1.17	12.54	1.80	1
1605	742898	AA405809	2.49	12.87	5.17	0.92	13.61	0.96	1
1606	1031736	AA609594	0.75	3.90	5.16	1.37	12.96	1.16	1
1607	53081	R16259	0.69	3.54	5.16	1.80	13.19	0.50	1
1608	1470278	AA866029	0.51	2.63	5.16	0.43	14.23	0.82	1
1609	767414	AA417915	0.59	3.04	5.15	1.12	13.32	1.02	1
1610	341065	W58191	0.52	2.68	5.15	1.67	12.49	1.28	1
1611	233712	H79035	0.42	2.14	5.14	10.92	2.33	2.19	1
1612	781447	AA428659	0.63	3.22	5.14	1.32	13.03	1.07	1
1613	1030764	AA608974	0.71	3.64	5.13	0.80	13.91	0.68	1
1614	196189	R92281	1.98	10.18	5.13	10.73	2.45	2.21	1
1615	279827	N40976	1.11	5.71	5.13	1.08	13.20	1.10	1
1616	1292121	AA707615	0.27	1.36	5.13	10.73	1.75	2.91	1
1617	490649	AA101777	2.39	12.23	5.12	11.35	2.00	2.00	1
1618	279278	N48590	0.43	2.19	5.11	1.25	13.11	0.98	1
1619	840786	AA486084	1.09	5.54	5.10	0.66	13.43	1.23	1
1620	288936	N62696	0.17	0.87	5.10	1.51	13.26	0.52	1
1621	742607	AA400389	0.83	4.24	5.10	1.21	13.06	1.01	1
1622	279806	N49109	0.43	2.18	5.07	1.55	12.47	1.21	1
1623	301842	N91175	2.45	12.39	5.06	1.14	13.28	0.75	1
1624	796123	AA460863	0.35	1.78	5.06	2.38	11.90	0.88	1
1625	283122	N45223	0.85	4.31	5.06	0.60	13.49	1.08	1
1626	812293	AA455096	0.45	2.25	5.05	2.60	10.93	1.62	1
1627	278572	N68178	2.84	14.29	5.04	1.69	11.65	1.78	1
1628	257746	N30597	0.82	4.11	5.02	2.55	11.42	1.09	1
1629	257779	N26993	0.52	2.63	5.01	1.70	12.41	0.93	1
1630	362795	AA018683	0.01	0.05	5.01	13.03	1.00	1.00	1
1631	290680	N67619	0.55	2.76	5.00	1.21	11.91	1.89	1
1632	119289	T98056	0.20	0.98	5.00	1.31	12.76	0.93	1
1633	285680	N67570	1.14	5.69	4.99	0.73	13.08	1.15	1
1634	784130	AA432075	1.61	7.99	4.97	13.44	0.13	1.33	1
1635	345118	W72920	0.45	2.23	4.96	0.78	12.45	1.84	1
1636	428298	AA004946	0.76	3.75	4.95	1.05	12.80	0.98	1
1637	813242	AA455904	0.24	1.17	4.94	0.43	13.67	0.73	1
1638	232789	H73947	5.50	27.18	4.94	0.96	2.40	11.45	1

**Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.**

1639	41558	R67259	0.31	1.54	4.94	0.53	13.93	0.36
1640	589861	AA156112	0.68	3.33	4.94	0.78	12.51	1.52
1641	346997	W79445	2.28	11.24	4.93	0.21	14.40	0.20
1642	743058	AA406083	0.50	2.47	4.93	1.19	12.16	1.44
1643	811899	AA454652	2.37	11.69	4.93	1.24	11.25	2.29
1644	841022	AA486864	1.30	6.40	4.92	1.30	12.51	0.96
1645	1466633	AA883680	0.16	0.81	4.92	1.09	10.94	2.74
1646	648056	AA206865	1.12	5.51	4.92	2.39	10.12	2.25
1647	272169	N35489	0.19	0.95	4.91	0.82	13.48	0.44
1648	609047	AA167500	0.68	3.35	4.91	1.14	12.92	0.66
1649	471114	H11071	0.23	1.12	4.91	1.98	12.52	0.22
1650	731404	AA412247	0.94	4.63	4.90	0.99	13.24	0.48
1651	490484	AA101632	0.24	1.16	4.90	14.47	0.18	0.05
1652	49203	H15695	0.24	1.19	4.89	1.09	1.08	12.48
1653	280763	N50563	0.04	0.19	4.88	1.56	12.12	0.96
1654	731393	AA421054	0.27	1.31	4.88	1.60	11.90	1.14
1655	430276	AA010388	1.14	5.56	4.88	1.59	12.60	0.45
1656	768008	AA418744	1.40	6.82	4.87	2.38	0.46	11.76
1657	589484	AA148826	0.37	1.82	4.86	1.34	11.70	1.55
1658	488683	AA044903	1.84	8.97	4.86	0.79	12.99	0.81
1659	322079	W37753	2.68	13.01	4.86	1.09	11.94	1.55
1660	214006	H70775	0.13	0.65	4.86	1.07	11.25	2.25
1661	166245	R88267	0.01	0.05	4.86	1.00	1.00	12.57
1662	36688	R62470	0.43	2.06	4.85	1.10	12.19	1.25
1663	115277	T86932	0.64	3.08	4.84	1.16	12.34	1.04
1664	167076	R89700	1.77	8.56	4.84	1.76	1.07	11.69
1665	289828	N64603	0.64	3.08	4.84	1.04	11.69	1.78
1666	731205	AA417275	0.08	0.36	4.83	1.64	12.71	0.13
1667	242037	H93328	0.42	2.05	4.83	0.83	1.93	11.72
1668	415976	W85709	0.67	3.23	4.82	1.36	11.63	1.48
1669	509584	AA045574	2.68	12.92	4.82	1.96	11.76	0.74
1670	824358	AA489681	0.49	2.35	4.82	0.97	11.57	1.92
1671	743416	AA609334	1.12	5.41	4.82	0.99	12.76	0.71
1672	289666	N77779	0.04	0.21	4.82	1.07	11.91	1.48
1673	1034738	AA780190	3.28	15.82	4.82	10.78	1.98	1.68
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Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1674	796199	AA461119	0.82	3.96	4.81	0.92	12.21	1.32	1
1675	137017	R35665	0.01	0.04	4.79	11.66	1.36	1.36	1
1676	163174	H27379	5.35	25.60	4.79	1.89	1.32	11.14	1
1677	898195	AA598567	1.46	6.99	4.78	2.18	0.33	11.85	1
1678	295483	W05026	54.50	260.67	4.78	1.67	1.75	10.93	1
1679	429202	AA005358	0.42	2.01	4.78	1.06	12.91	0.38	1
1680	703581	AA278759	4.41	21.07	4.77	0.10	13.94	0.29	1
1681	377051	AA057620	0.14	0.65	4.77	0.47	12.05	1.79	1
1682	1390860	AA844447	1.17	5.60	4.77	0.94	12.67	0.71	1
1683	743536	AA609422	0.07	0.31	4.75	2.16	10.53	1.56	1
1684	785810	AA459857	0.72	3.40	4.75	0.91	12.47	0.86	1
1685	858761	AA779048	0.73	3.45	4.74	0.47	13.16	0.60	1
1686	279771	N49098	0.92	4.38	4.74	1.77	11.33	1.12	1
1687	289794	N59295	1.45	6.86	4.73	0.70	11.93	1.55	1
1688	297857	N68928	0.28	1.32	4.72	0.64	12.95	0.57	1
1689	743901	AA634482	0.43	2.04	4.71	1.57	11.28	1.27	1
1690	788519	AA452578	1.20	5.63	4.71	1.23	12.29	0.60	1
1691	811907	AA454654	0.10	0.47	4.71	1.82	11.88	0.42	1
1692	796170	AA461086	0.83	3.89	4.70	0.87	12.35	0.88	1
1693	782208	AA431975	0.68	3.20	4.69	1.26	11.65	1.16	1
1694	256907	N30096	0.58	2.71	4.68	12.24	0.73	1.07	1
1695	327480	W20462	0.20	0.92	4.68	1.83	11.61	0.60	1
1696	306513	N91811	1.15	5.40	4.68	0.40	1.53	12.09	1
1697	665148	AA195651	1.11	5.18	4.67	0.54	12.86	0.62	1
1698	43936	H05777	0.64	3.00	4.67	1.66	11.17	1.17	1
1699	429681	AA011597	1.17	5.43	4.65	0.88	12.67	0.41	1
1700	752770	AA417895	2.01	9.34	4.65	2.12	0.35	11.48	1
1701	22541	T89084	0.18	0.82	4.61	0.90	11.08	1.84	1
1702	277063	N39590	1.09	5.04	4.61	1.05	11.59	1.18	1
1703	743193	AA401436	0.59	2.73	4.60	1.39	11.34	1.08	1
1704	1161564	AA877815	1.06	4.90	4.60	1.72	1.15	10.93	1
1705	842927	AA486445	2.04	9.37	4.60	1.65	11.22	0.94	1
1706	1476065	AA873060	22.57	103.69	4.59	1.67	0.01	12.11	1
1707	730343	AA412485	0.38	1.74	4.58	1.32	11.01	1.41	1
1708	345318	W73022	0.30	1.38	4.58	1.45	11.30	1.00	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1709	306243	N90583	0.84	3.82	4.56	0.97	11.01	1.70	1
1710	743531	AA609430	0.50	2.28	4.55	1.53	11.06	1.05	1
1711	251212	H97514	0.65	2.94	4.54	0.98	11.38	1.26	1
1712	809976	AA454844	0.82	3.70	4.54	0.84	11.52	1.25	1
1713	418400	W92798	0.88	4.00	4.54	0.79	12.54	0.28	1
1714	448024	AA702788	0.99	4.48	4.53	1.05	12.10	0.45	1
1715	841153	AA487046	0.90	4.06	4.53	1.23	11.03	1.34	1
1716	434828	AA703117	0.99	4.46	4.51	1.04	0.90	11.60	1
1717	50781	H17022	0.37	1.66	4.51	10.45	0.97	2.11	1
1718	842847	AA486288	0.66	2.99	4.51	0.52	10.76	2.26	1
1719	743893	AA634479	0.31	1.40	4.51	1.26	10.02	2.26	1
1720	788246	AA454085	0.84	3.80	4.51	0.88	12.14	0.51	1
1721	726663	AA398247	0.45	2.04	4.51	1.01	12.07	0.44	1
1722	36491	R46700	0.13	0.60	4.50	0.90	11.61	0.98	1
1723	347066	W79525	0.45	2.03	4.49	1.24	10.60	1.64	1
1724	859382	AA666087	0.48	2.17	4.49	0.93	11.03	1.50	1
1725	489549	AA101833	0.72	3.23	4.49	1.68	10.50	1.29	1
1726	254468	N22210	1.01	4.55	4.49	1.12	11.58	0.76	1
1727	293013	N63768	0.01	0.04	4.49	1.00	1.00	11.46	1
1728	416889	W86832	1.38	6.20	4.48	1.04	12.03	0.39	1
1729	789383	AA464861	1.80	8.04	4.46	1.80	10.20	1.39	1
1730	431255	AA682549	0.58	2.59	4.45	0.58	12.07	0.71	1
1731	377898	AA777098	0.64	2.85	4.45	11.75	0.61	1.00	1
1732	200656	R98407	0.52	2.32	4.45	0.86	10.04	2.45	1
1733	280431	N51574	0.69	3.08	4.44	0.91	11.55	0.87	1
1734	48060	H11631	0.39	1.74	4.44	0.91	11.78	0.63	1
1735	75644	T58430	0.15	0.64	4.43	0.82	10.29	2.19	1
1736	795349	AA453261	0.43	1.90	4.43	1.34	10.92	1.04	1
1737	284803	N59870	0.42	1.88	4.43	1.21	11.30	0.77	1
1738	488276	AA085759	0.25	1.11	4.42	1.34	10.60	1.31	1
1739	730147	AA412499	1.04	4.58	4.42	1.10	11.12	1.03	1
1740	773512	AA427847	0.93	4.12	4.42	0.49	12.55	0.21	1
1741	24895	R39014	0.28	1.25	4.41	0.88	11.25	1.12	1
1742	130742	R22024	1.19	5.27	4.41	0.89	11.45	0.90	1
1743	259374	N31952	1.42	6.26	4.41	12.36	0.39	0.48	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1744	362279	AA001222	0.05	0.21	4.41	2.15	0.21	10.87	1
1745	134666	R28254	1.25	5.48	4.40	0.94	1.71	10.55	1
1746	252515	H87471	4.33	18.96	4.38	0.21	0.18	12.75	1
1747	50986	H18433	0.09	0.38	4.38	2.06	0.11	10.97	1
1748	595604	AA187269	3.85	16.86	4.38	2.12	0.08	10.93	1
1749	1049321	AA620783	0.16	0.68	4.37	0.98	11.12	1.00	1
1750	201045	R99831	0.19	0.83	4.37	0.99	10.89	1.23	1
1751	379709	AA778089	0.47	2.03	4.35	10.31	1.12	1.63	1
1752	625838	AA187679	0.93	4.05	4.35	1.46	10.22	1.37	1
1753	594556	AA169121	1.83	7.94	4.35	1.39	10.88	0.78	1
1754	1031367	AA609135	0.55	2.37	4.35	1.11	11.31	0.62	1
1755	462598	AA705103	0.24	1.03	4.34	1.13	10.36	1.54	1
1756	1031907	AA609744	0.81	3.50	4.34	1.33	10.40	1.29	1
1757	811764	AA463444	0.17	0.73	4.33	0.81	11.87	0.31	1
1758	278198	N63543	0.49	2.12	4.33	1.18	11.07	0.73	1
1759	1417934	AA878731	0.66	2.84	4.32	0.63	11.68	0.65	1
1760	30821	R42569	0.29	1.27	4.32	0.99	10.57	1.39	1
1761	35410	R43805	0.15	0.65	4.29	1.09	10.98	0.82	1
1762	796711	AA460702	0.56	2.39	4.29	1.04	10.85	0.97	1
1763	838278	AA457474	0.55	2.36	4.28	0.87	10.98	0.97	1
1764	782773	AA448172	1.25	5.35	4.27	1.36	10.44	1.02	1
1765	418384	W92970	1.03	4.38	4.27	1.51	10.60	0.69	1
1766	254276	N22495	1.10	4.69	4.26	1.04	10.91	0.84	1
1767	731183	AA417250	1.41	6.00	4.26	0.65	11.45	0.68	1
1768	767284	AA418414	0.66	2.81	4.25	0.92	11.09	0.76	1
1769	813639	AA447743	0.60	2.56	4.25	1.83	10.13	0.79	1
1770	276689	N34892	0.65	2.74	4.24	1.02	10.76	0.96	1
1771	726709	AA398267	0.02	0.10	4.24	1.53	10.89	0.30	1
1772	81427	T60168	1.10	4.66	4.23	0.41	0.63	11.65	1
1773	271672	N31584	2.82	11.90	4.21	0.82	0.72	11.10	1
1774	30894	R41804	0.20	0.86	4.21	1.17	10.21	1.25	1
1775	306005	N91382	0.47	1.98	4.21	1.25	10.85	0.52	1
1776	280453	N51583	0.77	3.22	4.21	1.14	10.41	1.07	1
1777	782217	AA431988	0.66	2.79	4.20	11.47	0.38	0.75	1
1778	795452	AA454186	0.65	2.71	4.20	1.18	10.46	0.96	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1779	795168	AA453465	0.83	3.49	4.20	1.08	10.99	0.52	1
1780	306066	N91003	1.33	5.55	4.19	11.10	0.35	1.12	1
1781	730100	AA412446	0.42	1.75	4.19	1.10	10.39	1.07	1
1782	280217	N47841	1.55	6.49	4.19	11.57	0.51	0.49	1
1783	415145	W95082	0.64	2.67	4.19	11.74	0.02	0.81	1
1784	1056172	AA620995	9.21	38.53	4.19	0.25	0.15	12.16	1
1785	731298	AA421001	0.87	3.65	4.18	1.12	10.52	0.91	1
1786	415413	W81117	1.06	4.43	4.18	1.35	10.31	0.89	1
1787	785760	AA449686	0.08	0.35	4.17	0.54	11.10	0.88	1
1788	809863	AA455130	0.75	3.11	4.13	1.41	10.02	0.97	1
1789	730406	AA470079	1.07	4.41	4.13	1.25	10.33	0.80	1
1790	76847	T50995	0.01	0.04	4.11	0.93	1.00	10.41	1
1791	1048872	AA778533	0.25	1.03	4.10	0.41	10.14	1.75	1
1792	347268	W80791	0.68	2.80	4.10	0.47	10.78	1.05	1
1793	812222	AA455358	0.51	2.10	4.10	0.89	10.06	1.35	1
1794	412983	AA707753	0.67	2.74	4.09	0.89	10.57	0.82	1
1795	29397	R05660	0.66	2.71	4.09	0.93	10.58	0.76	1
1796	773392	AA425749	0.35	1.43	4.09	0.95	10.32	0.99	1
1797	772916	AA479912	0.03	0.13	4.07	1.43	10.47	0.31	1
1798	172785	H20046	0.52	2.12	4.07	0.85	1.18	10.18	1
1799	782617	AA447561	1.53	6.21	4.07	1.60	10.08	0.53	1
1800	841253	AA487146	2.04	8.26	4.06	1.93	0.02	10.22	1
1801	725365	AA292054	0.78	3.16	4.06	0.28	11.66	0.23	1
1802	625465	AA187287	3.49	14.17	4.06	0.52	10.38	1.26	1
1803	435573	AA701933	0.96	3.89	4.04	0.59	0.27	11.28	1
1804	53122	R15891	0.76	3.07	4.04	0.82	11.02	0.28	1
1805	784064	AA443823	1.53	6.18	4.04	0.96	10.39	0.76	1
1806	729924	AA399633	0.44	1.77	4.02	0.96	10.21	0.91	1
1807	45542	H08560	0.27	1.08	4.02	0.75	10.27	1.03	1
1808	1055278	AA621478	0.22	0.90	4.01	0.79	10.00	1.25	1
1809	490071	AA138071	0.50	2.00	4.01	1.16	10.15	0.72	1
1810	300024	N78903	2.24	8.94	4.00	0.93	10.51	0.56	1
1811	665738	AA194189	0.29	1.14	3.98	0.96	10.42	0.55	1
1812	27072	R37780	0.56	2.21	3.96	0.80	10.16	0.91	1
1813	593218	AA159613	1.57	6.19	3.95	0.80	10.43	0.62	1

Table 2-10: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 3 fold or higher in 3 of 3, or 5 fold or higher in at least 2 of 3 or 10 fold or higher in at least 1 of 3 cancer cell lines.

1814	491690	AA150401	0.63	2.48	3.94	0.76	10.07	1.00	1
1815	772904	AA479906	0.01	0.05	3.94	10.25	0.79	0.79	1
1816	784105	AA432064	0.25	0.98	3.94	0.46	11.14	0.22	1
1817	1031279	AA609056	0.85	3.36	3.94	0.87	10.25	0.68	1
1818	754333	AA479313	2.55	9.98	3.91	0.74	0.95	10.05	1
1819	45783	H08598	0.20	0.77	3.91	1.30	10.29	0.14	1
1820	1455671	AA863169	2.69	10.36	3.86	0.88	10.27	0.43	1
1821	42115	R60717	0.24	0.92	3.84	0.68	10.18	0.67	1
1822	795736	AA460285	0.19	0.74	3.84	0.78	0.61	10.13	1
1823	449438	AA777886	0.05	0.19	3.81	0.79	0.20	10.44	1
1824	757238	AA426067	0.24	0.93	3.81	0.42	10.26	0.74	1
1825	41903	R60705	0.11	0.42	3.78	0.25	10.60	0.48	1
1826	1466416	AA885470	1.08	4.06	3.76	0.56	10.08	0.64	1
1827	744944	AA625890	6.57	24.47	3.72	10.66	0.12	0.40	1
1828	609155	AA176867	0.47	1.73	3.70	10.29	0.80	0.02	1
1829	429424	AA007687	0.04	0.15	3.65	0.65	10.04	0.25	1
1830	504761	AA148735	0.03	0.11	3.60	0.32	10.14	0.32	1

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines

Order	IMAGE Clone ID	Gen Bank Accession Number	MPM1(PREC)	Ave Cancer Cell Lines Values	Fold(AveCell line/MPM1)	Fold(MPM2/MP M1)	Fold(MPM2/MP PM1)	Fold(MPM2/MP PM1)	# of Cancer Cell Lines
1	757165	AA43950	0.01	5.71	591.67	7.33	66.37	1701.31	3
2	592707	AA160606	0.01	1.66	234.30	8.10	680.66	14.13	3
3	220851	H95633	0.01	1.28	196.56	8.10	570.75	10.82	3
4	782804	AA448186	0.01	1.81	180.70	8.88	526.08	7.15	3
5	1343732	AA725564	0.01	1.12	112.48	13.45	301.13	22.85	3
6	784296	AA447079	0.01	0.66	65.30	45.84	106.60	43.45	3
7	796569	AA460463	0.01	0.35	63.57	16.10	138.91	35.70	3
8	1558655	AA976561	0.08	4.36	54.32	97.06	17.92	47.97	3
9	743016	AA406036	0.01	0.50	50.47	15.70	123.80	11.93	3
10	39442	R51617	0.10	5.02	49.93	99.52	44.77	5.49	3
11	33076	R44048	0.80	36.21	45.35	56.36	29.19	50.51	3
12	626390	AA189106	0.07	3.16	45.16	91.62	20.97	22.90	3
13	128083	R09747	0.01	0.44	44.34	25.03	101.07	6.93	3
14	812170	AA456035	0.01	0.30	37.18	16.25	80.79	14.51	3
15	50288	H17888	0.01	0.32	36.79	12.25	87.45	10.68	3
16	243181	H94482	0.01	0.36	35.62	5.91	88.28	12.68	3
17	256911	N30098	0.01	0.25	34.44	20.19	73.72	9.41	3
18	1030613	AA608832	0.01	0.33	33.18	5.81	82.72	11.01	3
19	487861	AA045436	0.02	0.59	32.57	29.44	39.44	28.82	3
20	270626	N33331	0.01	0.32	31.52	8.48	9.21	76.87	3
21	291057	N72115	0.23	6.85	29.19	24.48	38.30	24.80	3
22	1455835	AA863292	0.01	0.40	29.16	9.10	30.24	48.14	3
23	108378	T77729	0.01	0.41	29.13	7.73	36.47	43.19	3
24	1391682	AA789328	0.02	0.44	28.83	5.99	65.78	14.72	3
25	263014	H99813	0.63	17.34	27.31	19.07	21.59	41.29	3
26	303180	N92764	0.01	0.27	27.21	13.82	36.04	31.77	3
27	42415	R60981	0.12	3.11	26.71	9.46	65.35	5.30	3



Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

28	768056	AA418903	0.01	0.16	26.24	7.36	35.03	36.33	3
29	46896	H09818	0.05	1.21	25.96	33.86	30.16	13.87	3
30	151184	H02294	0.48	12.53	25.93	38.89	13.26	25.64	3
31	38344	R49555	0.01	0.24	25.84	5.18	58.23	14.11	3
32	41595	R59556	0.01	0.17	25.59	12.08	52.20	12.48	3
33	430092	AA009840	0.40	10.00	24.80	34.18	13.61	26.60	3
34	1049033	AA778675	0.38	9.30	24.51	46.38	16.26	10.88	3
35	884790	AA629838	0.01	0.24	24.29	30.26	10.09	32.50	3
36	23345	R39191	0.01	0.16	23.97	44.37	17.55	9.98	3
37	284714	N63057	0.01	0.16	23.01	8.11	34.50	26.43	3
38	365149	AA025142	0.16	3.52	22.24	38.20	16.96	11.55	3
39	418094	W90036	0.01	0.21	20.90	5.07	7.89	49.72	3
40	51581	H22824	0.01	0.25	20.42	18.18	18.45	24.62	3
41	270975	N32542	0.01	0.20	20.40	5.36	33.42	22.42	3
42	51916	H22563	0.12	2.46	20.27	20.94	30.57	9.30	3
43	40010	R54036	0.01	0.19	19.50	7.04	11.18	40.27	3
44	1467161	AA883187	0.02	0.31	18.24	10.20	24.35	20.16	3
45	488431	AA047441	0.17	2.95	17.83	10.45	28.90	14.13	3
46	435099	AA701315	0.01	0.21	17.36	7.52	33.82	10.73	3
47	67440	T49355	1.96	33.78	17.25	25.95	8.91	16.88	3
48	280155	N47012	0.04	0.63	17.15	5.64	11.78	34.04	3
49	454083	AA676998	0.01	0.17	16.89	8.16	10.67	31.84	3
50	347586	W81432	0.01	0.17	16.56	7.84	8.92	32.94	3
51	269606	N26769	0.01	0.21	16.54	6.72	36.98	5.91	3
52	358990	W92263	0.01	0.16	16.35	10.47	5.09	33.48	3
53	235164	H78466	0.01	0.09	16.34	9.38	30.25	9.40	3
54	357373	W93717	0.70	11.31	16.17	5.81	15.89	26.82	3
55	82869	T69270	0.02	0.32	15.94	21.48	14.07	12.25	3
56	767315	AA418545	0.02	0.29	15.63	6.61	33.79	6.49	3
57	447416	AA702335	0.25	3.80	15.00	33.97	5.66	5.36	3
58	250069	H97140	0.02	0.35	14.92	5.14	24.61	15.00	3
59	28298	R40434	0.02	0.35	14.61	5.11	16.46	22.27	3
60	757389	AA437142	0.01	0.14	14.54	5.64	32.86	5.13	3
61	25915	R39951	0.01	0.14	14.20	9.65	6.51	26.44	3
62	1031446	AA609189	0.04	0.50	14.14	5.44	31.74	5.25	3

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line. Genes upregulated 5 fold or more in at least 2 cancer cell lines.

63	32109	R42780	0.09	1.25	14.14	31.21	5.86	5.35	3
64	30850	R42600	0.03	0.39	13.78	6.39	29.82	5.12	3
65	1035796	AA628867	1.14	15.63	13.71	10.64	9.76	20.74	3
66	898286	AA598974	1.21	16.52	13.65	13.47	11.86	15.62	3
67	502003	AA128617	0.01	0.17	13.58	7.33	15.99	17.41	3
68	359269	AA016225	0.01	0.13	13.43	9.24	8.92	22.12	3
69	415089	W93379	0.65	8.63	13.24	8.23	12.04	19.45	3
70	1466409	AA885478	0.14	1.91	13.23	22.16	9.42	8.12	3
71	51103	H19217	0.02	0.23	13.14	14.72	17.85	6.86	3
72	244050	N34042	0.01	0.17	12.88	5.65	21.72	11.26	3
73	897807	AA598531	0.29	3.56	12.37	21.95	7.81	7.37	3
74	845441	AA644550	0.01	0.12	12.30	5.26	7.58	24.06	3
75	686172	AA262211	1.18	14.39	12.18	5.65	13.80	17.09	3
76	1030798	AA609002	0.03	0.31	11.73	10.15	8.33	16.72	3
77	210820	H67712	0.04	0.45	11.30	5.06	7.88	20.94	3
78	788209	AA453433	0.01	0.09	10.70	11.07	8.10	12.92	3
79	204483	H58234	1.27	13.51	10.64	11.48	13.18	7.26	3
80	430928	AA678295	0.74	7.64	10.34	20.21	5.77	5.03	3
81	376452	AA041197	0.03	0.32	9.78	5.69	8.56	15.10	3
82	433567	AA701652	0.02	0.16	9.57	11.04	10.28	7.37	3
83	280375	N47113	1.12	10.61	9.52	11.98	10.79	5.79	3
84	303099	N90779	0.15	1.40	9.48	5.53	11.42	11.50	3
85	448059	AA702684	0.22	2.04	9.46	6.47	14.40	7.50	3
86	269300	N24042	1.12	10.53	9.44	5.48	13.22	9.62	3
87	489213	AA045665	0.37	3.43	9.32	9.36	11.24	7.35	3
88	43733	H04789	0.11	1.03	9.24	10.06	12.44	5.24	3
89	234617	H77727	0.07	0.60	9.16	12.99	8.66	5.84	3
90	177884	H46176	0.16	1.44	9.15	5.38	8.45	13.62	3
91	897956	AA598817	0.15	1.40	9.13	13.21	8.47	5.71	3
92	324901	W49672	0.01	0.11	8.92	7.38	12.47	6.90	3
93	78217	T50699	0.01	0.05	8.82	9.14	7.21	10.11	3
94	624627	AA187351	0.56	4.90	8.72	5.30	9.17	11.70	3
95	491184	AA137072	1.49	12.90	8.67	6.69	13.78	5.53	3
96	826273	AA520999	0.45	3.90	8.62	5.02	10.99	9.84	3
97	42906	R60019	0.19	1.57	8.31	9.78	8.33	6.83	3

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 5 fold or more in at least 2 cancer cell lines.

98	773383	AA425755	0.94	7.83	8.30	5.27	11.10	8.51	3
99	813271	AA455938	0.07	0.54	7.87	11.86	6.62	5.12	3
100	200402	R96941	0.75	5.69	7.61	8.56	5.22	9.05	3
101	950690	AA608568	0.73	5.53	7.61	7.77	7.09	7.97	3
102	260035	N30372	0.02	0.15	7.55	6.04	5.10	11.50	3
103	52704	H29227	0.53	3.90	7.31	7.30	6.65	7.97	3
104	740620	AA477400	0.02	0.12	7.30	6.01	6.44	9.46	3
105	853368	AA663310	2.51	18.03	7.18	5.15	7.63	8.78	3
106	126650	R06944	0.43	3.05	7.05	5.35	7.83	7.98	3
107	433576	AA701645	0.10	0.72	6.85	10.00	5.36	5.19	3
108	134719	R28287	0.31	2.07	6.69	9.45	5.02	5.60	3
109	151055	H02231	7.49	47.65	6.36	6.67	5.78	6.63	3
110	128947	R10264	1.20	7.33	6.13	6.92	5.67	5.79	3
111	773073	AA425302	2.73	16.66	6.10	7.47	5.73	5.08	3
112	814306	AA459318	4.89	29.59	6.05	6.00	6.93	5.21	3
113	275871	R93875	0.01	0.07	5.99	5.03	7.41	5.52	3
114	45882	H08785	0.34	1.94	5.63	5.49	5.63	5.77	3
115	40299	R52085	0.02	0.12	5.20	5.19	5.01	5.40	3
116	299559	N74995	0.01	9.92	991.80	1.38	2966.06	7.96	2
117	365551	AA009615	0.01	8.39	838.64	1.96	2506.90	7.05	2
118	42627	R60995	0.01	9.14	660.46	2.32	61.14	1917.92	2
119	277327	N57483	0.01	9.00	613.07	1.58	1831.96	5.67	2
120	773640	AA433885	0.01	5.08	508.28	2.41	1516.35	6.10	2
121	290213	N64379	0.01	3.94	393.88	0.73	1171.33	9.57	2
122	510631	AA099431	0.01	3.19	319.36	4.57	944.19	9.33	2
123	781157	AA429904	0.01	2.83	283.26	1.00	841.07	7.73	2
124	781036	AA446446	0.01	1.70	228.86	10.58	674.66	1.35	2
125	768226	AA424900	0.01	1.04	103.67	3.09	302.09	5.84	2
126	203878	H56453	0.02	1.93	95.78	0.80	140.40	146.14	2
127	366039	AA071503	0.03	2.66	86.03	5.01	249.63	3.45	2
128	815794	AA485214	0.08	6.83	85.65	0.89	150.46	105.59	2
129	795627	AA459917	0.01	0.51	85.17	3.09	239.88	12.54	2
130	347182	W80611	0.01	0.82	81.58	1.42	229.57	13.76	2
131	1161830	AA876021	0.01	0.71	71.26	3.19	203.18	7.41	2
132	746152	AA419486	0.08	5.16	65.49	0.87	95.72	99.88	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

133	346942	W94289	0.01	0.61	61.20	3.73	168.10	11.76	2
134	395708	AA757754	0.01	0.83	60.41	6.88	173.62	0.73	2
135	795858	AA461522	0.03	1.60	60.34	6.29	170.43	4.30	2
136	131452	R23270	0.45	26.93	59.79	104.24	4.69	70.45	2
137	684879	AA251784	0.05	2.87	58.88	1.03	51.92	123.70	2
138	344589	W73144	0.22	12.41	56.02	78.84	88.50	0.72	2
139	562811	AA086475	0.01	0.28	53.90	5.36	154.39	1.93	2
140	30207	R40231	0.04	2.21	52.11	0.54	150.40	5.39	2
141	757435	AA437224	1.20	60.94	50.82	144.61	1.37	6.47	2
142	33827	R44741	0.02	1.10	50.72	0.63	139.36	12.17	2
143	825740	AA504844	0.26	13.02	49.67	0.91	56.58	91.51	2
144	785849	AA449120	0.01	0.60	45.99	2.24	128.30	7.45	2
145	1389018	AA855158	0.02	0.81	43.48	3.54	120.65	6.23	2
146	28498	R37395	0.01	0.43	43.37	5.62	121.33	3.16	2
147	757368	AA437126	0.01	0.42	41.72	4.59	109.53	11.05	2
148	1367900	AA810225	0.01	0.41	41.11	4.81	99.20	19.33	2
149	366209	AA062985	0.01	0.38	38.18	3.08	106.34	5.11	2
150	1435339	AA857748	0.01	0.38	37.79	5.72	105.49	2.18	2
151	196544	R91566	0.25	8.56	34.73	0.93	52.03	51.22	2
152	37823	R59473	0.03	1.12	32.46	1.79	89.38	6.23	2
153	49858	H29290	0.08	2.62	31.22	87.92	0.12	5.61	2
154	743189	AA401434	0.02	0.70	30.56	2.89	81.20	7.60	2
155	815861	AA485052	0.26	7.89	30.35	0.77	34.54	55.73	2
156	489656	AA099369	0.01	0.30	30.08	1.00	7.97	81.28	2
157	38347	R49439	0.21	5.88	27.65	1.51	76.38	5.06	2
158	167205	R90934	0.58	16.16	27.63	72.37	9.84	0.70	2
159	53039	R15740	0.01	0.27	27.34	0.74	70.25	11.03	2
160	796549	AA460274	0.01	0.27	27.13	1.21	69.04	11.15	2
161	771294	AA443624	0.01	0.20	27.04	8.33	1.36	71.43	2
162	194318	H50655	0.53	14.38	26.99	0.69	27.83	52.45	2
163	769000	AA425158	0.01	0.26	26.26	5.77	72.00	1.00	2
164	280699	N47445	0.55	14.15	25.90	2.28	11.75	63.66	2
165	283379	N52767	0.02	0.39	25.65	0.59	66.04	10.31	2
166	787856	AA452139	0.01	0.29	25.59	4.23	62.71	9.84	2
167	27605	R40018	0.07	1.90	25.57	2.05	68.60	6.05	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line; Genes upregulated 5 fold or more in at least 2 cancer cell lines.

168	430255	AA010383	0.01	0.25	25.24	4.46	54.64	16.63	2
169	530958	AA070437	0.01	0.25	25.21	2.29	67.88	5.46	2
170	53315	R15813	0.01	0.25	25.10	2.87	64.40	8.05	2
171	687972	AA236986	0.01	0.17	25.09	3.61	60.05	11.62	2
172	357884	W94488	0.01	0.25	24.95	2.32	41.17	31.35	2
173	172517	H19826	1.00	24.91	24.86	2.27	26.82	45.50	2
174	251806	H96647	0.01	0.24	24.50	1.76	60.48	11.25	2
175	80643	T57803	1.09	26.54	24.25	0.44	9.54	62.76	2
176	824025	AA490945	0.31	7.41	24.24	0.95	28.65	43.13	2
177	29585	R42112	0.04	0.84	23.75	8.09	59.71	3.46	2
178	825606	AA504625	0.15	3.51	23.68	0.87	21.91	48.25	2
179	81050	T70198	0.01	0.23	23.00	1.00	42.67	25.34	2
180	855910	AA630328	0.01	0.16	22.37	4.98	30.37	31.76	2
181	34204	R44936	0.17	3.74	22.30	3.82	51.95	11.14	2
182	591055	AA161097	0.02	0.34	21.79	2.34	9.53	53.51	2
183	824270	AA491261	0.17	3.65	21.71	0.88	10.05	54.20	2
184	46843	H10072	0.01	0.14	21.70	39.83	1.50	23.77	2
185	79000	T61938	1.90	40.77	21.44	37.52	23.72	3.08	2
186	259884	N32904	0.91	19.16	20.97	4.40	10.88	47.62	2
187	686552	AA255954	0.30	6.19	20.39	0.93	42.76	17.48	2
188	199337	R95684	0.20	3.94	20.04	1.29	30.54	28.27	2
189	795831	AA461508	0.01	0.20	19.97	1.00	38.72	20.17	2
190	826256	AA520979	0.17	3.26	19.61	1.10	7.58	50.17	2
191	197265	R86970	0.01	0.20	19.50	2.79	10.31	45.41	2
192	162310	H28091	0.17	3.30	19.47	2.35	30.81	25.26	2
193	759163	AA496022	0.01	0.19	19.37	7.38	1.00	49.74	2
194	809583	AA456628	0.01	0.19	19.26	9.69	1.93	46.16	2
195	80338	T65736	1.11	21.01	18.93	41.41	14.31	1.08	2
196	39722	R54492	0.01	0.17	18.85	3.39	10.12	43.06	2
197	1049284	AA620747	0.04	0.74	18.21	2.02	47.06	5.54	2
198	489076	AA057195	0.02	0.35	18.01	4.49	38.83	10.71	2
199	839048	AA487505	0.19	3.45	17.78	1.21	45.91	6.22	2
200	42907	R60020	0.03	0.54	17.62	1.87	45.44	5.54	2
201	361899	AA001376	0.01	0.17	17.44	1.97	34.15	16.22	2
202	823727	AA489662	0.03	0.44	17.25	2.37	40.61	8.77	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

203	1031568	AA609304	0.05	0.86	17.19	4.26	42.11	5.21	2
204	1410444	AA857163	0.06	1.06	17.19	1.87	37.48	12.21	2
205	756629	AA481481	0.01	0.11	16.78	14.65	1.51	34.18	2
206	266366	N26559	0.02	0.29	16.62	2.86	39.78	7.22	2
207	283070	N51297	0.07	1.14	16.47	2.84	40.90	5.65	2
208	753411	AA410437	0.03	0.40	15.85	3.94	36.93	6.69	2
209	825726	AA504838	0.19	2.94	15.84	2.63	16.52	28.36	2
210	746232	AA417713	0.38	5.98	15.64	0.69	21.09	25.15	2
211	487766	AA045175	0.02	0.30	15.57	4.69	22.78	19.22	2
212	811766	AA463445	0.26	3.91	15.03	1.53	28.43	15.13	2
213	51599	H18932	0.26	3.94	14.95	0.42	26.10	18.34	2
214	364865	AA035745	0.04	0.54	14.60	36.64	0.27	6.87	2
215	785293	AA476543	0.11	1.64	14.41	24.69	3.02	15.54	2
216	770860	AA434388	0.01	0.14	14.40	1.00	18.93	23.25	2
217	1461609	AA883800	0.25	3.51	14.24	10.07	4.19	28.45	2
218	856289	AA774665	1.24	17.58	14.13	5.00	9.24	28.16	2
219	436402	AA699601	0.16	2.19	14.09	0.88	36.28	5.10	2
220	418004	W90705	0.30	4.17	13.89	2.99	11.04	27.66	2
221	41406	R56149	0.01	0.13	13.76	17.85	18.97	4.48	2
222	26806	R37738	0.10	1.31	13.68	2.42	26.44	12.18	2
223	771004	AA427719	0.29	3.95	13.50	0.64	21.58	18.27	2
224	49499	H15549	0.63	8.41	13.36	2.08	8.82	29.19	2
225	824074	AA491227	0.02	0.26	13.22	3.39	18.08	18.18	2
226	1467166	AA883181	0.08	1.05	13.14	3.08	29.16	7.18	2
227	284288	N52193	0.01	0.08	13.00	10.97	1.54	26.50	2
228	364844	AA035730	0.03	0.36	12.97	30.80	0.76	7.37	2
229	361122	AA017379	0.01	0.13	12.88	0.65	12.28	25.70	2
230	1526789	AA911236	0.65	8.32	12.81	1.86	8.17	28.39	2
231	33066	R43915	0.06	0.71	12.79	7.14	29.01	2.23	2
232	1055121	AA621355	0.02	0.25	12.67	6.31	28.51	3.21	2
233	530954	AA070435	0.16	1.99	12.64	1.33	31.49	5.10	2
234	785446	AA453616	0.01	0.13	12.56	22.57	14.55	0.58	2
235	757428	AA437212	0.40	4.99	12.41	1.18	29.00	7.04	2
236	1049185	AA620697	0.76	9.44	12.39	10.40	0.39	26.39	2
237	364352	AA022496	0.01	0.12	12.38	1.96	14.19	20.98	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

238	47264	H10713	0.30	3.72	12.36	2.11	23.87	11.09	2
239	71671	T57927	0.01	0.12	12.24	6.29	29.43	1.00	2
240	1049079	AA778717	0.03	0.31	12.10	3.28	15.47	17.55	2
241	785368	AA476576	1.38	16.58	12.06	8.77	4.23	23.17	2
242	195845	R92201	0.14	1.89	12.02	1.00	14.95	20.10	2
243	451649	AA706901	1.40	16.82	11.98	4.34	18.70	12.88	2
244	739450	AA477227	1.99	23.53	11.82	2.08	17.13	16.24	2
245	46461	H09940	0.33	3.89	11.80	3.09	13.18	19.11	2
246	591157	AA161188	0.02	0.18	11.71	0.58	20.54	14.01	2
247	33839	R44816	0.96	11.24	11.67	3.60	19.31	12.09	2
248	357138	W93523	0.02	0.20	11.63	10.87	20.61	3.40	2
249	366971	AA026682	2.38	27.64	11.61	3.65	10.18	20.99	2
250	609228	AA179161	0.01	0.11	11.46	4.58	5.70	24.11	2
251	592728	AA160670	0.03	0.34	11.17	0.33	16.85	16.34	2
252	770854	AA427737	0.09	0.95	11.06	2.56	22.78	7.83	2
253	193333	H48070	0.36	3.90	10.90	0.92	17.96	13.80	2
254	795746	AA460299	0.52	5.68	10.87	17.77	9.89	4.94	2
255	753428	AA410434	0.57	6.12	10.84	0.51	15.37	16.62	2
256	298417	N74131	0.03	0.31	10.83	2.09	20.21	10.20	2
257	795840	AA461513	0.01	0.06	10.81	4.64	15.78	12.02	2
258	257955	N30751	0.86	9.32	10.79	2.05	10.22	20.10	2
259	433155	AA680136	0.01	0.11	10.76	22.91	1.00	8.36	2
260	767403	AA417820	0.56	5.93	10.66	4.43	22.31	5.22	2
261	824802	AA489073	0.77	8.09	10.50	0.74	8.99	21.77	2
262	814769	AA454949	1.16	12.13	10.45	21.90	4.33	5.14	2
263	307138	N93721	0.04	0.44	10.36	2.67	21.63	6.78	2
264	712401	AA281784	0.08	0.87	10.32	0.88	14.48	15.60	2
265	203184	H54451	0.41	4.21	10.31	0.86	6.31	23.76	2
266	277621	N49389	0.54	5.55	10.21	0.77	14.23	15.64	2
267	729953	AA412049	0.93	9.47	10.19	22.87	7.21	0.48	2
268	590640	AA158035	0.01	0.12	10.11	11.51	17.15	1.65	2
269	197651	R94504	0.25	2.53	10.07	0.93	11.85	17.42	2
270	740457	AA478036	1.60	16.05	10.05	2.67	6.06	21.42	2
271	898073	AA598787	0.04	0.37	10.00	3.74	20.48	5.78	2
272	745248	AA626167	0.24	2.42	9.97	8.61	20.18	1.12	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 5 fold or more in at least 2 cancer cell lines.

273	855391	AA664007	0.23	2.29	9.95	1.40	12.15	16.30	2
274	745490	AA625979	0.11	1.05	9.95	12.71	3.07	14.06	2
275	725877	AA292226	0.50	4.94	9.89	0.67	13.69	15.31	2
276	266135	N21633	0.39	3.82	9.87	1.10	17.62	10.88	2
277	154720	R55220	0.01	0.09	9.86	8.07	19.71	1.81	2
278	812994	AA464615	0.02	0.21	9.80	5.59	23.34	0.46	2
279	391987	A1003636	0.06	0.57	9.79	3.40	9.94	16.03	2
280	490387	AA120779	0.02	0.21	9.77	1.35	22.17	5.79	2
281	431242	AA682533	1.26	12.26	9.74	3.45	18.90	6.87	2
282	951305	AA620528	0.62	5.97	9.68	1.31	9.16	18.56	2
283	590500	AA157261	0.02	0.17	9.64	4.99	9.81	14.13	2
284	512116	AA133590	0.64	6.12	9.62	0.66	21.91	6.28	2
285	590727	AA156342	0.01	0.10	9.62	3.83	6.58	18.44	2
286	185695	R89490	0.02	0.16	9.56	1.61	17.50	9.58	2
287	35804	R46000	0.08	0.77	9.53	2.05	15.63	10.89	2
288	630013	AA219060	0.15	1.40	9.48	1.15	11.85	15.44	2
289	320495	W16659	0.01	0.09	9.47	10.45	1.00	16.97	2
290	430973	AA678348	0.76	7.14	9.41	3.48	5.97	18.79	2
291	645565	AA204830	0.62	5.85	9.41	4.56	7.97	15.70	2
292	866702	AA679180	0.01	0.09	9.40	8.70	1.04	18.46	2
293	490959	AA136664	0.53	5.02	9.39	1.84	5.32	21.00	2
294	435330	AA699926	0.01	0.08	9.36	8.59	1.12	18.37	2
295	700792	AA284072	0.01	0.06	9.34	11.43	1.54	15.06	2
296	346552	W74377	0.02	0.19	9.32	3.79	15.51	8.67	2
297	281162	N50962	0.02	0.22	9.31	0.97	12.53	14.44	2
298	814791	AA455242	0.68	6.35	9.29	1.35	16.72	9.79	2
299	1627705	A1017607	0.44	4.10	9.26	2.30	7.70	17.77	2
300	461488	AA705047	0.10	0.97	9.22	12.49	10.86	4.33	2
301	230882	R95962	0.10	0.87	9.18	2.37	19.73	5.45	2
302	781047	AA446462	1.08	9.89	9.17	4.58	11.63	11.30	2
303	46684	H10192	0.35	3.21	9.15	8.17	14.83	4.46	2
304	199577	R96579	0.27	2.44	9.12	0.81	13.04	13.51	2
305	141726	R69584	0.03	0.26	9.09	3.46	10.73	13.08	2
306	320865	W44766	0.03	0.26	9.07	12.50	0.36	14.35	2
307	490556	AA100696	0.01	0.09	9.07	5.08	1.00	21.12	2



Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 5 fold or more in at least 2 cancer cell lines.

308	266259	N26515	0.35	3.21	9.06	1.65	10.87	14.67	2
309	627541	AA192527	0.40	3.62	9.05	1.54	20.24	5.38	2
310	877632	AA488175	1.17	10.62	9.04	2.44	15.22	9.46	2
311	594758	AA172056	1.30	11.71	9.03	12.54	13.45	1.10	2
312	951241	AA620485	1.98	17.81	8.98	10.05	0.30	16.60	2
313	730036	AA416970	0.02	0.21	8.96	0.65	20.84	5.40	2
314	342640	W68220	0.67	5.97	8.87	11.72	2.96	11.94	2
315	175533	H41203	0.38	3.32	8.84	0.92	17.16	8.45	2
316	50227	H16772	0.25	2.16	8.81	9.92	2.08	14.43	2
317	884511	AA629999	4.51	39.21	8.70	0.36	17.44	8.30	2
318	1048995	AA778646	0.09	0.80	8.69	1.34	6.64	18.10	2
319	242952	H95638	5.65	48.92	8.66	3.86	6.65	15.48	2
320	878544	AA775863	3.96	34.28	8.65	1.87	16.58	7.50	2
321	897546	AA496998	0.01	0.09	8.56	10.33	1.00	14.35	2
322	462926	AA682321	0.60	5.11	8.53	6.22	0.52	18.86	2
323	71977	T52311	0.02	0.14	8.51	7.42	14.21	3.90	2
324	300615	N80764	0.83	6.98	8.42	0.78	6.50	17.99	2
325	324717	W47364	1.13	9.51	8.39	1.45	12.46	11.27	2
326	825416	AA504265	0.40	3.36	8.39	1.30	11.51	12.36	2
327	484535	AA036974	0.01	0.08	8.39	1.81	6.16	17.21	2
328	840150	AA485265	0.02	0.19	8.35	4.95	13.73	6.37	2
329	809557	AA455786	0.53	4.39	8.32	3.89	6.65	14.40	2
330	298429	N74617	1.62	13.45	8.31	2.41	6.27	16.24	2
331	842968	AA488324	1.30	10.75	8.30	5.22	0.41	19.27	2
332	37980	R61372	0.13	1.09	8.29	8.74	13.18	2.96	2
333	280882	N50806	0.02	0.15	8.25	9.98	1.67	13.09	2
334	380884	AA058576	0.18	1.49	8.21	2.23	11.14	11.26	2
335	503581	AA131239	0.02	0.14	8.15	5.83	0.56	18.07	2
336	358599	W96216	0.03	0.25	8.13	3.04	13.64	7.71	2
337	30148	R41329	2.63	21.34	8.13	4.35	5.10	14.93	2
338	203275	H54752	1.29	10.44	8.09	5.06	3.98	15.23	2
339	433253	AA699427	0.76	6.11	8.08	1.22	13.54	9.48	2
340	838776	AA457576	0.03	0.22	8.03	0.38	18.34	5.36	2
341	1292182	AA705825	0.03	0.28	8.02	3.42	7.53	13.11	2
342	230261	H94944	0.01	0.08	8.02	2.25	8.34	13.46	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 5 fold or more in at least 2 cancer cell lines.

343	193892	H51765	1.10	8.81	8.00	0.92	14.68	8.40	2
344	701625	AA284172	0.29	2.29	7.89	1.06	13.94	8.68	2
345	38833	R50775	0.66	5.20	7.83	2.27	15.21	6.01	2
346	190325	H29897	0.37	2.89	7.77	4.86	11.97	6.49	2
347	745393	AA625764	0.08	0.60	7.77	3.94	9.24	10.12	2
348	782259	AA431741	0.75	5.81	7.75	11.54	7.24	4.46	2
349	502444	AA156795	0.02	0.14	7.73	0.57	7.43	15.20	2
350	1505919	AA908257	0.05	0.35	7.72	4.23	8.93	10.00	2
351	121251	T96718	3.19	24.59	7.70	7.55	4.17	11.39	2
352	73596	T55607	1.74	13.42	7.70	4.60	7.66	10.84	2
353	204644	H57082	0.27	2.05	7.70	1.18	12.63	9.28	2
354	322461	W15305	0.22	1.68	7.70	6.23	3.58	13.28	2
355	810661	AA463982	0.01	0.08	7.69	7.96	14.11	1.00	2
356	882510	AA676460	34.04	261.61	7.68	3.35	8.00	11.71	2
357	46927	H10231	0.07	0.53	7.67	2.09	11.89	9.03	2
358	46740	H10068	0.03	0.25	7.66	1.41	14.72	6.84	2
359	1035664	AA780365	0.13	1.03	7.65	12.36	8.59	2.00	2
360	345743	W72666	2.36	18.06	7.64	1.23	16.02	5.66	2
361	120695	T95804	0.01	0.08	7.61	0.83	12.70	9.32	2
362	725340	AA291773	0.72	5.46	7.60	1.27	5.74	15.79	2
363	530820	AA070331	0.01	0.04	7.55	10.53	4.96	7.15	2
364	448032	AA702802	0.01	0.08	7.54	5.64	1.00	15.99	2
365	39833	R53455	0.97	7.28	7.53	0.35	12.36	9.88	2
366	770879	AA434403	0.75	5.64	7.53	3.47	10.88	8.23	2
367	868169	AA633835	0.16	1.18	7.49	1.25	5.39	15.83	2
368	811166	AA485749	0.01	0.08	7.46	12.26	0.92	9.18	2
369	83666	T61122	0.03	0.20	7.44	12.64	4.41	5.28	2
370	128243	R12473	0.83	6.14	7.44	1.30	8.97	12.04	2
371	37538	R49644	0.04	0.31	7.41	0.99	11.96	9.29	2
372	435076	AA701455	2.95	21.88	7.41	10.35	6.94	4.93	2
373	309288	N93924	3.23	23.90	7.39	5.03	4.68	12.46	2
374	843163	AA488367	7.80	57.27	7.34	3.00	6.84	12.18	2
375	278729	N62936	1.35	9.91	7.34	0.34	13.66	8.02	2
376	66317	T66816	3.88	28.27	7.29	6.83	0.63	14.40	2
377	451907	AA706968	2.08	15.11	7.27	11.07	0.08	10.67	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

378	266631	N22766	0.05	0.35	7.24	1.57	9.92	10.22	2
379	32756	R43308	0.30	2.20	7.23	7.23	2.06	12.41	2
380	50904	H19234	0.16	1.17	7.23	1.81	13.06	6.82	2
381	565734	AA135809	1.24	8.99	7.23	2.92	12.65	6.11	2
382	85670	T62072	0.80	5.80	7.23	4.11	7.03	10.54	2
383	359722	AA011182	0.04	0.31	7.22	1.78	13.46	6.43	2
384	251936	H97488	4.68	33.83	7.22	4.39	11.90	5.38	2
385	796114	AA460952	0.94	6.75	7.20	3.01	9.60	8.99	2
386	809828	AA455521	0.64	4.64	7.20	2.72	7.61	11.27	2
387	825282	AA504201	2.23	15.96	7.17	2.25	8.89	10.38	2
388	809567	AA456611	0.01	0.10	7.15	4.40	6.35	10.69	2
389	897271	AA677655	0.02	0.11	7.14	0.87	8.75	11.80	2
390	1416782	AA894557	14.77	105.24	7.13	13.51	0.03	7.84	2
391	814779	AA455237	2.03	14.44	7.12	2.47	11.28	7.62	2
392	785845	AA449118	0.09	0.62	7.11	13.68	2.34	5.32	2
393	199644	R96520	0.21	1.51	7.11	1.14	11.35	8.84	2
394	278531	N66158	13.50	95.95	7.11	2.00	12.50	6.81	2
395	283173	N45236	2.09	14.78	7.08	11.72	5.87	3.65	2
396	143365	R74203	0.01	0.08	7.03	4.65	9.95	6.50	2
397	247050	N53940	0.29	2.01	7.02	1.68	7.50	11.87	2
398	1637343	AI015359	14.33	100.32	7.00	4.74	7.07	9.20	2
399	345330	W72556	0.04	0.28	7.00	0.85	5.67	14.49	2
400	415906	W86196	0.06	0.44	6.96	3.01	6.52	11.35	2
401	82215	T68878	0.10	0.68	6.95	2.37	9.22	9.27	2
402	811067	AA485453	5.22	36.26	6.95	2.09	8.38	10.38	2
403	79254	T58146	0.01	0.07	6.93	14.50	5.14	1.16	2
404	40773	R56046	0.06	0.39	6.93	6.40	11.26	3.14	2
405	264502	N20305	0.53	3.69	6.92	6.49	4.41	9.86	2
406	814225	AA465238	1.08	7.46	6.92	4.76	10.31	5.69	2
407	1500162	AA886739	0.55	3.78	6.90	2.34	9.72	8.65	2
408	856585	AA669222	0.01	0.06	6.89	7.04	1.10	12.53	2
409	787938	AA452278	0.40	2.74	6.88	10.95	1.51	8.19	2
410	586650	AA129135	0.69	4.75	6.85	2.73	8.48	9.34	2
411	1641367	AI025259	0.12	0.83	6.84	1.77	7.15	11.61	2
412	726791	AA398406	0.04	0.25	6.83	1.52	13.88	5.09	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Lines: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

413	131316	R23055	1.19	8.14	6.82	3.20	5.03	12.23	2
414	204580	H58903	0.41	2.79	6.80	1.22	12.71	6.48	2
415	681906	AA256231	0.01	0.08	6.79	4.75	10.24	5.38	2
416	214604	H71230	0.05	0.34	6.79	9.29	4.78	6.30	2
417	46091	H08595	1.32	8.93	6.79	6.37	9.34	4.64	2
418	359119	AA010065	4.09	27.70	6.77	5.57	3.78	10.97	2
419	809503	AA454562	0.24	1.65	6.77	12.08	7.25	0.98	2
420	811582	AA454597	1.50	10.08	6.74	9.56	1.82	8.83	2
421	51083	H17139	0.04	0.30	6.72	7.84	4.68	7.65	2
422	1031885	AA609723	0.54	3.61	6.72	8.02	8.01	4.14	2
423	725677	AA398949	1.11	7.44	6.71	2.08	10.73	7.33	2
424	814246	AA465593	9.85	65.62	6.66	3.37	9.66	6.95	2
425	950445	AA599092	2.82	18.79	6.65	7.13	4.39	8.44	2
426	813149	AA456695	0.70	4.67	6.65	7.85	4.47	7.62	2
427	768172	AA424790	1.17	7.75	6.64	11.27	0.58	8.09	2
428	204214	H59203	0.68	4.52	6.64	8.09	3.71	8.12	2
429	781362	AA448400	0.01	0.07	6.62	7.97	10.05	1.85	2
430	73638	T55728	9.61	63.60	6.62	1.16	9.16	9.54	2
431	1468597	AA884622	0.01	0.07	6.59	7.52	7.44	4.80	2
432	375827	AA039851	0.02	0.12	6.57	2.44	7.59	9.68	2
433	43662	H05645	0.06	0.42	6.54	10.89	5.69	3.05	2
434	51460	H20847	1.12	7.31	6.53	5.27	9.69	4.63	2
435	281733	N48075	0.41	2.64	6.52	4.93	8.97	5.67	2
436	72441	T51617	0.04	0.24	6.51	1.47	11.33	6.74	2
437	32134	R43328	1.01	6.55	6.50	2.35	11.59	5.55	2
438	1573251	AA953357	1.34	8.71	6.49	10.79	2.65	6.04	2
439	160233	H21943	1.30	8.44	6.48	4.26	5.16	10.01	2
440	773564	AA428186	0.02	0.12	6.46	2.50	9.29	7.59	2
441	487297	AA045508	1.13	7.26	6.45	3.07	8.32	7.97	2
442	877784	AA626788	4.30	27.63	6.43	1.38	9.13	8.78	2
443	430007	AA034115	0.26	1.70	6.43	4.03	5.78	9.48	2
444	788488	AA452542	0.07	0.45	6.42	2.05	11.14	6.08	2
445	786078	AA448664	1.05	6.74	6.41	2.85	6.70	9.70	2
446	395955	AA757564	0.13	0.82	6.41	5.00	4.97	9.25	2
447	159462	H15910	0.03	0.21	6.41	5.69	12.25	1.28	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

448	194717	R89846	0.26	1.66	6.39	0.90	6.06	12.22	2
449	782476	AA431753	0.76	4.82	6.38	8.52	6.40	4.22	2
450	277112	N39611	0.59	3.76	6.37	2.87	7.88	8.37	2
451	772410	AA405533	0.71	4.54	6.37	1.54	5.53	12.04	2
452	196824	R93068	0.24	1.50	6.36	0.76	12.20	6.13	2
453	814211	AA465223	1.01	6.46	6.36	1.48	6.38	11.23	2
454	814444	AA459244	0.77	4.87	6.31	1.06	8.03	9.86	2
455	486538	AA042812	8.25	51.96	6.30	1.79	10.78	6.32	2
456	292936	N63744	0.72	4.53	6.29	3.26	6.93	8.69	2
457	416075	W65878	0.93	5.87	6.29	2.64	8.05	8.17	2
458	289496	N63988	0.35	2.21	6.28	1.45	10.13	7.26	2
459	302221	N77828	0.22	1.37	6.27	7.40	2.46	8.95	2
460	203179	H54659	0.25	1.58	6.27	2.11	8.82	7.88	2
461	34254	R44201	0.02	0.15	6.27	2.51	6.21	10.08	2
462	267135	N24869	0.37	2.29	6.25	0.27	5.01	13.49	2
463	769857	AA430367	2.19	13.69	6.25	13.18	0.27	5.30	2
464	130004	R11605	0.38	2.35	6.25	3.19	5.05	10.52	2
465	435957	AA701978	0.66	4.11	6.23	0.87	12.34	5.48	2
466	23073	R38539	0.22	1.36	6.22	0.68	8.92	9.06	2
467	52128	H22568	1.94	12.01	6.20	1.35	7.60	9.66	2
468	320602	W31389	0.01	0.08	6.20	11.05	0.76	6.77	2
469	813586	AA447662	1.97	12.17	6.19	4.19	5.59	8.79	2
470	277476	N56875	0.05	0.33	6.16	1.20	10.69	6.60	2
471	1470195	AA865924	0.42	2.57	6.15	8.48	2.18	7.78	2
472	854701	AA630104	2.60	15.94	6.13	0.57	7.55	10.29	2
473	770992	AA430744	2.03	12.43	6.13	6.15	2.69	9.56	2
474	1032080	AA609891	0.47	2.89	6.13	1.59	7.76	9.04	2
475	50983	H18017	0.02	0.14	6.12	7.62	5.90	4.83	2
476	195817	R92186	0.39	2.40	6.11	1.12	9.73	7.48	2
477	781109	AA430052	2.62	16.02	6.11	2.39	8.86	7.07	2
478	814303	AA459106	4.36	26.54	6.09	1.52	11.73	5.03	2
479	256680	H96392	0.81	4.93	6.06	3.55	6.77	7.86	2
480	489805	AA102068	0.01	0.08	6.06	6.43	4.55	7.19	2
481	773147	AA425404	1.31	7.89	6.04	4.66	8.09	5.37	2
482	951068	AA620437	0.16	0.94	6.02	9.62	3.03	5.40	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

483	813410	AA458646	1.29	7.71	6.00	2.89	9.92	5.20	2
484	814080	AA465353	1.48	8.89	5.99	0.97	9.75	7.25	2
485	825284	AA504202	1.39	8.34	5.98	2.44	7.62	7.87	2
486	276972	N39233	0.50	2.99	5.98	1.57	8.57	7.79	2
487	1505686	AA879423	0.09	0.55	5.96	2.30	9.04	6.52	2
488	563860	AA101173	0.12	0.69	5.93	0.97	11.46	5.38	2
489	289645	N62866	0.31	1.85	5.93	11.41	0.30	6.09	2
490	272888	N36008	2.68	15.84	5.91	1.63	7.34	8.76	2
491	271076	N29918	0.54	3.18	5.90	7.03	3.15	7.53	2
492	284783	N59866	0.06	0.36	5.90	6.66	8.19	2.86	2
493	1048949	AA778603	0.13	0.76	5.88	0.84	8.58	8.22	2
494	246549	N73252	0.43	2.56	5.88	1.87	6.81	8.94	2
495	357531	W94009	1.37	8.00	5.86	4.55	5.43	7.60	2
496	1343468	AA709271	0.69	4.03	5.83	8.54	2.32	6.64	2
497	150623	H02158	0.01	0.06	5.82	6.78	1.00	9.69	2
498	809535	AA454585	7.47	43.39	5.81	3.50	5.22	8.71	2
499	287637	N59136	1.87	10.85	5.80	4.53	5.30	7.58	2
500	745360	AA625662	5.55	32.21	5.80	3.92	7.27	6.22	2
501	814995	AA465090	0.83	4.83	5.80	2.24	9.55	5.62	2
502	1031113	AA609914	0.04	0.22	5.79	1.21	10.89	5.26	2
503	74738	T57359	2.36	13.63	5.78	3.39	5.86	8.09	2
504	147385	H01332	0.03	0.16	5.76	4.97	6.03	6.29	2
505	506483	AA708605	0.10	0.59	5.76	1.96	10.22	5.11	2
506	287581	N62128	0.82	4.73	5.76	5.27	10.45	1.55	2
507	28475	R13434	0.46	2.62	5.74	1.10	7.72	8.40	2
508	38510	R50752	0.59	3.37	5.74	2.46	7.30	7.45	2
509	48862	H10788	1.07	6.12	5.73	2.42	9.02	5.77	2
510	191546	H37817	0.24	1.35	5.72	0.89	6.27	10.01	2
511	27817	R40481	0.03	0.15	5.71	2.14	9.62	5.36	2
512	504826	AA150777	0.83	4.73	5.69	6.56	5.66	4.86	2
513	34063	R45952	0.28	1.58	5.68	5.72	9.78	1.55	2
514	291374	N72274	1.00	5.71	5.68	1.00	6.51	9.54	2
515	282104	N51498	0.51	2.92	5.68	5.83	9.35	1.87	2
516	196037	R89363	0.41	2.35	5.68	1.17	8.12	7.73	2
517	667598	AA228130	0.90	5.08	5.66	3.60	5.70	7.68	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes upregulated 5 fold or more in at least 2 cancer cell lines.

518	433474	AA699560	3.28	18.53	5.65	8.40	2.36	6.19	2
519	856592	AA689218	1.19	6.88	5.64	10.55	1.37	5.00	2
520	395609	AA757588	0.05	0.25	5.62	0.55	7.77	8.55	2
521	770979	AA427400	0.02	0.10	5.62	5.02	0.44	11.39	2
522	357344	W93500	0.01	0.06	5.62	5.85	8.42	2.59	2
523	146882	R80790	4.49	25.20	5.62	6.88	4.48	5.48	2
524	220700	H93424	0.96	5.38	5.61	5.49	4.88	6.45	2
525	950926	AA608730	3.17	17.75	5.60	8.06	1.26	7.48	2
526	361688	W96197	0.01	0.07	5.60	0.80	10.00	5.99	2
527	193139	H47315	0.03	0.17	5.59	1.43	9.88	5.46	2
528	121798	T98201	0.72	4.03	5.59	6.89	7.41	2.47	2
529	471707	AA035580	0.66	3.65	5.55	6.12	2.85	7.67	2
530	51465	H23983	0.07	0.40	5.54	4.68	6.93	5.02	2
531	878798	AA670408	23.98	132.57	5.53	1.02	7.04	8.52	2
532	1505898	AA907714	0.07	0.41	5.52	2.10	8.01	6.45	2
533	839081	AA487608	12.19	66.94	5.49	7.57	0.09	8.81	2
534	491615	AA115559	0.93	5.08	5.49	3.62	6.29	6.56	2
535	130845	R22308	2.02	11.11	5.49	0.87	7.74	7.85	2
536	241432	H80685	1.63	8.93	5.48	7.11	7.64	1.70	2
537	197206	R92812	0.98	5.38	5.47	0.67	8.14	7.61	2
538	773170	AA428514	0.05	0.26	5.45	1.75	8.29	6.30	2
539	256720	H96356	0.01	0.05	5.44	1.86	6.97	7.49	2
540	361069	AA017213	0.06	0.31	5.44	3.64	5.09	7.59	2
541	195786	R89287	0.19	1.05	5.44	1.09	6.79	8.44	2
542	1466998	AA884428	0.08	0.45	5.43	2.62	8.15	5.51	2
543	451805	AA706829	6.18	33.51	5.42	1.61	5.96	8.69	2
544	898097	AA598803	1.04	5.65	5.42	6.63	5.49	4.14	2
545	1467751	AA883100	0.11	0.59	5.41	1.84	6.69	7.71	2
546	814350	AA458827	1.32	7.13	5.38	2.06	5.32	8.77	2
547	459947	AA779383	0.30	1.59	5.37	4.66	5.58	5.87	2
548	789204	AA450205	2.16	11.60	5.37	5.05	3.79	7.27	2
549	431245	AA682545	1.90	10.19	5.37	3.91	5.22	6.98	2
550	741790	AA402965	2.17	11.61	5.35	1.13	6.68	8.24	2
551	460114	AA676840	0.10	0.55	5.34	3.39	7.08	5.55	2
552	357285	W93682	0.18	0.94	5.33	3.66	6.07	6.26	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 5 fold or more in at least 2 cancer cell lines.

553	951125	AA620556	6.73	35.80	5.32	4.34	5.23	6.39	2
554	156473	R73525	0.01	0.05	5.32	8.91	1.01	6.03	2
555	129664	R16676	1.18	6.28	5.31	1.15	7.63	7.16	2
556	898258	AA598668	0.40	2.11	5.31	1.02	7.20	7.71	2
557	261714	H98822	2.57	13.64	5.30	6.09	5.91	3.90	2
558	813997	AA455652	4.09	21.66	5.30	0.94	5.86	9.09	2
559	265102	N21334	0.76	4.03	5.29	1.07	9.61	5.20	2
560	247089	N57858	0.04	0.23	5.29	1.93	6.76	7.18	2
561	108395	T77840	3.81	20.12	5.29	2.59	8.00	5.27	2
562	1055831	AA628190	0.08	0.41	5.28	2.22	6.68	6.95	2
563	204299	H59305	0.70	3.68	5.26	5.35	2.95	7.50	2
564	1505735	AA879474	0.03	0.14	5.26	5.79	2.97	7.02	2
565	1048685	AA620614	0.11	0.58	5.24	2.21	5.07	8.43	2
566	490753	AA133166	8.60	44.95	5.23	1.93	7.32	6.43	2
567	594517	AA169645	2.92	15.25	5.23	2.51	5.49	7.68	2
568	784126	AA446748	0.07	0.35	5.19	2.95	5.99	6.64	2
569	845602	AA644334	1.83	9.47	5.18	1.72	6.91	6.90	2
570	768146	AA426561	0.10	0.51	5.17	1.23	9.14	5.15	2
571	490060	AA136060	0.48	2.47	5.16	3.25	5.27	6.97	2
572	726658	AA398218	0.01	0.05	5.15	7.12	1.00	7.33	2
573	415806	W84774	0.01	0.06	5.15	6.70	0.80	7.94	2
574	278483	N66132	6.20	31.82	5.13	4.34	5.12	5.93	2
575	1293016	AA683338	0.04	0.19	5.11	1.68	5.30	8.34	2
576	448920	AA777779	0.08	0.43	5.10	1.62	8.40	5.28	2
577	1500388	AA885851	0.15	0.77	5.09	4.62	5.03	5.63	2
578	491524	AA148505	6.40	32.60	5.09	1.14	9.02	5.12	2
579	155575	R71689	0.39	1.98	5.09	2.35	5.29	7.63	2
580	1602209	AA962541	3.26	16.55	5.07	6.08	8.82	0.32	2
581	739247	AA421230	8.07	40.76	5.05	1.54	8.12	5.48	2
582	824109	AA490605	0.04	0.22	5.04	0.82	8.65	5.67	2
583	243653	N49899	0.69	3.45	5.02	1.63	5.51	7.92	2
584	825411	AA504272	4.68	23.47	5.02	3.05	6.66	5.33	2
585	564803	AA129552	0.91	4.55	5.01	6.00	3.76	5.26	2
586	206052	H61552	0.91	4.54	4.99	0.91	8.28	5.79	2
587	504279	AA149637	1.71	8.53	4.99	7.00	6.10	1.87	2



Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

588	264162	N20480	0.39	1.93	4.97	1.99	6.33	6.61	2
589	877767	AA626784	0.15	0.75	4.96	5.36	5.47	4.03	2
590	34294	R44346	1.28	6.34	4.95	0.98	8.07	5.79	2
591	186132	H39560	0.01	0.05	4.94	8.10	5.74	0.97	2
592	784772	AA478542	1.78	8.75	4.92	0.97	8.14	5.65	2
593	757206	AA443969	2.34	11.53	4.92	3.32	5.83	5.61	2
594	147925	R82041	0.06	0.30	4.91	1.91	6.08	6.75	2
595	277545	N58982	0.43	2.11	4.90	1.20	6.72	6.79	2
596	563201	AA114106	0.02	0.08	4.90	5.15	7.27	2.27	2
597	50114	H16743	1.70	8.32	4.90	0.37	7.99	6.33	2
598	1504152	AA904969	0.14	0.71	4.89	1.97	6.45	6.25	2
599	40721	R55750	0.30	1.49	4.88	1.57	7.62	5.46	2
600	471598	AA035384	7.11	34.71	4.88	2.09	5.39	7.16	2
601	767994	AA418918	0.54	2.66	4.87	3.38	5.34	5.90	2
602	290560	N62372	2.16	10.43	4.84	2.45	5.47	6.59	2
603	809508	AA454554	0.01	0.05	4.83	8.44	5.04	1.00	2
604	502296	AA156599	0.19	0.90	4.81	3.32	5.49	5.64	2
605	382451	AA064627	2.91	13.99	4.80	0.71	8.39	5.32	2
606	32517	R43271	0.01	0.05	4.80	7.91	5.50	1.00	2
607	838568	AA456931	19.35	92.90	4.80	2.12	5.68	6.60	2
608	258966	N31641	1.57	7.55	4.80	1.94	5.26	7.20	2
609	503715	AA131526	5.14	24.62	4.79	2.51	6.24	5.62	2
610	154472	R54846	0.72	3.44	4.77	1.60	6.79	5.93	2
611	204129	H55915	0.35	1.68	4.75	1.18	6.82	6.25	2
612	826089	AA521411	0.13	0.60	4.75	1.30	6.47	6.47	2
613	123255	R00275	0.92	4.36	4.75	2.49	5.38	6.37	2
614	453005	AA779165	3.47	16.44	4.74	5.66	0.08	8.48	2
615	460553	AA700415	0.06	0.31	4.74	2.27	5.74	6.21	2
616	43826	H05768	0.96	4.54	4.72	2.52	5.51	6.12	2
617	66406	T66936	0.74	3.48	4.67	5.15	3.86	5.01	2
618	432732	AA701587	0.03	0.12	4.67	6.88	1.33	5.80	2
619	882488	AA676590	0.06	0.27	4.65	6.62	5.90	1.44	2
620	376764	AA046321	0.36	1.69	4.65	5.09	5.23	3.64	2
621	46097	H08796	0.39	1.82	4.65	5.94	2.63	5.38	2
622	809466	AA443094	0.90	4.18	4.63	2.19	5.33	6.39	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 5 fold or more in at least 2 cancer cell lines.

623	745192	AA626847	1.12	5.17	4.62	2.36	5.63	5.88	2
624	595109	AA173926	2.40	11.07	4.60	3.28	5.08	5.45	2
625	898083	AA598797	3.37	15.49	4.59	2.32	5.20	6.25	2
626	796606	AA460521	0.97	4.45	4.59	2.55	5.24	5.98	2
627	327245	AA284291	0.98	4.50	4.59	2.99	5.72	5.05	2
628	744044	AA629251	0.01	0.06	4.58	5.99	0.75	7.00	2
629	882355	AA676286	2.64	12.03	4.56	6.34	5.06	2.28	2
630	261567	H98655	2.99	13.59	4.54	1.15	6.62	5.85	2
631	824728	AA488979	1.11	5.05	4.54	0.93	7.47	5.23	2
632	283208	N51367	0.59	2.67	4.54	0.99	7.39	5.23	2
633	453229	AA704858	0.08	0.38	4.54	1.08	5.53	7.00	2
634	132954	R24451	0.65	2.96	4.53	2.21	5.84	5.54	2
635	588840	AA157787	3.00	13.59	4.53	3.16	5.08	5.34	2
636	731031	AA421270	8.95	40.40	4.52	2.12	6.30	5.12	2
637	1468466	AA85096	0.60	2.71	4.50	5.38	2.55	5.56	2
638	206272	H58542	1.42	6.39	4.50	1.27	5.28	6.95	2
639	75650	T58434	1.01	4.53	4.49	2.26	6.17	5.02	2
640	257312	N29624	0.36	1.60	4.48	0.90	6.98	5.57	2
641	814765	AA454947	2.35	10.51	4.48	5.20	5.13	3.12	2
642	1048899	AA778562	0.07	0.32	4.48	1.56	5.09	6.78	2
643	51700	H22854	0.24	1.09	4.47	6.45	5.25	1.71	2
644	1466599	AA83660	0.12	0.53	4.46	1.21	6.24	5.93	2
645	51328	H20743	0.01	0.06	4.44	2.31	5.02	5.98	2
646	1504005	AA904776	0.11	0.49	4.44	1.72	5.71	5.87	2
647	194811	R89765	0.42	1.88	4.42	0.87	5.63	6.76	2
648	126239	R06372	0.02	0.08	4.42	5.24	2.84	5.17	2
649	726858	AA398355	1.71	7.57	4.42	7.74	0.22	5.29	2
650	110772	T90621	13.07	57.53	4.40	2.19	5.60	5.41	2
651	758302	AA404338	0.03	0.14	4.39	6.57	0.31	6.30	2
652	530545	AA112979	0.19	0.84	4.38	2.44	5.46	5.23	2
653	1461715	AA884382	0.17	0.73	4.35	2.38	5.14	5.54	2
654	745523	AA626247	0.09	0.40	4.35	1.74	6.04	5.26	2
655	744911	AA625791	0.10	0.42	4.34	1.92	5.25	5.86	2
656	784589	AA443300	0.02	0.10	4.33	5.57	6.96	0.44	2
657	647816	AA205320	0.25	1.07	4.32	0.99	5.51	6.47	2

Table 2-11: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 5 fold or more in at least 2 cancer cell lines.

658	80946	T70122	5.27	22.74	4.32	1.50	5.60	5.84	2
659	757463	AA437245	0.09	0.39	4.28	1.45	5.78	5.62	2
660	45514	H08227	0.06	0.27	4.28	1.28	5.77	5.79	2
661	280909	N50828	1.43	6.07	4.25	1.08	5.61	6.07	2
662	814906	AA465692	2.68	11.37	4.24	1.91	5.44	5.36	2
663	272238	N35579	2.10	8.82	4.19	1.25	5.55	5.76	2
664	42400	R60949	1.37	5.73	4.17	5.58	1.07	5.87	2
665	281103	N50935	2.75	11.43	4.16	1.40	5.50	5.58	2
666	1466824	AA883755	0.09	0.36	4.16	1.38	5.73	5.36	2
667	505997	AA708431	0.41	1.69	4.14	5.38	1.63	5.41	2
668	841287	AA487206	2.36	9.76	4.13	0.84	6.05	5.49	2
669	126695	R07012	0.14	0.57	4.12	1.58	5.14	5.65	2
670	858292	AA633993	2.38	9.78	4.10	0.57	5.73	6.01	2
671	1469211	AA862814	0.20	0.83	4.09	1.23	5.12	5.93	2
672	73659	T54527	1.12	4.55	4.08	0.97	5.71	5.55	2
673	79726	T62552	1.04	4.25	4.08	5.88	5.23	1.12	2
674	292388	N79230	1.82	7.30	4.01	5.25	1.78	5.01	2
675	239661	H79566	0.02	0.07	3.92	5.37	5.82	0.56	2
676	882483	AA676598	2.77	10.81	3.91	1.13	5.04	5.56	2
677	248517	H84915	0.76	2.97	3.90	1.12	5.12	5.46	2
678	247587	N58136	0.02	0.09	3.90	5.46	5.69	0.55	2
679	193420	H47089	0.40	1.56	3.87	1.01	5.60	5.01	2
680	487141	AA045340	1.95	7.56	3.87	0.43	5.56	5.63	2

Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 10 fold or more in at least 2 cancer cell lines.

Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 10 fold or more in at least 2 cancer cell lines.

Order	IMAGE Clone ID	Gen Bank Accession Number	MPM1(PrEC)	Ave Cancer Cell Lines Values	Fold (Ave Cell line/MPM1)	Fold(MPM2/M PM1)	Fold(MPM2/M M1)	Fold(MPM271/MP PM1)	# of Cancer Cell Lines
1	1343732	AA725564	0.01	1.12	112.48	13.45	301.13	22.85	3
2	784296	AA447079	0.01	0.66	65.30	45.84	106.60	43.45	3
3	796569	AA460463	0.01	0.35	63.57	16.10	138.91	35.70	3
4	1558655	AA976561	0.08	4.36	54.32	97.06	17.92	47.97	3
5	743016	AA406036	0.01	0.50	50.47	15.70	123.80	11.93	3
6	33076	R44048	0.80	36.21	45.35	56.36	29.19	50.51	3
7	626390	AA189106	0.07	3.16	45.16	91.62	20.97	22.90	3
8	812170	AA456035	0.01	0.30	37.18	16.25	80.79	14.51	3
9	50288	H17888	0.01	0.32	36.79	12.25	87.45	10.68	3
10	487861	AA045436	0.02	0.59	32.57	29.44	39.44	28.82	3
11	291057	N72115	0.23	6.85	29.19	24.48	38.30	24.80	3
12	263014	H98813	0.63	17.34	27.31	19.07	21.59	41.29	3
13	303180	N92764	0.01	0.27	27.21	13.82	36.04	31.77	3
14	46896	H09818	0.05	1.21	25.96	33.86	30.16	13.87	3
15	151184	H02294	0.48	12.53	25.93	38.89	13.26	25.64	3
16	41595	R59556	0.01	0.17	25.59	12.08	52.20	12.48	3
17	430092	AA009840	0.40	10.00	24.80	34.18	13.61	26.60	3
18	1049033	AA778675	0.38	9.30	24.51	46.38	16.26	10.88	3
19	884790	AA629838	0.01	0.24	24.29	30.26	10.09	32.50	3
20	365149	AA025142	0.16	3.52	22.24	38.20	16.96	11.55	3
21	51581	H22824	0.01	0.25	20.42	18.18	18.45	24.62	3
22	1467161	AA883187	0.02	0.31	18.24	10.20	24.35	20.16	3
23	488431	AA047441	0.17	2.95	17.83	10.45	28.90	14.13	3
24	82869	T69270	0.02	0.32	15.94	21.48	14.07	12.25	3
25	898286	AA598974	1.21	16.52	13.65	13.47	11.86	15.62	3
26	42827	R60995	0.01	9.14	660.46	2.32	61.14	1917.92	2
27	757165	AA443950	0.01	5.71	591.67	7.33	66.37	1701.31	2
28	592707	AA160606	0.01	1.66	234.30	8.10	680.66	14.13	2
29	781036	AA446446	0.01	1.70	228.86	10.58	674.66	1.35	2

Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line. Genes upregulated 10 fold or more in at least 2 cancer cell lines.

30	220851	H95633	0.01	1.28	196.56	8.10	570.75	10.82	2
31	203878	H56453	0.02	1.93	95.78	0.80	140.40	146.14	2
32	815794	AA485214	0.08	6.83	85.65	0.89	150.46	105.59	2
33	795627	AA459917	0.01	0.51	85.17	3.09	239.88	12.54	2
34	347182	W80611	0.01	0.82	81.58	1.42	229.57	13.76	2
35	746152	AA419486	0.08	5.16	65.49	0.87	95.72	99.88	2
36	346942	W94289	0.01	0.61	61.20	3.73	168.10	11.76	2
37	131452	R23270	0.45	26.93	59.79	104.24	4.69	70.45	2
38	684879	AA251784	0.05	2.87	58.88	1.03	51.92	123.70	2
39	344589	W73144	0.22	12.41	56.02	78.84	88.50	0.72	2
40	33827	R44741	0.02	1.10	50.72	0.63	139.36	12.17	2
41	39442	R51617	0.10	5.02	49.93	99.52	44.77	5.49	2
42	825740	AA504844	0.26	13.02	49.67	0.91	56.58	91.51	2
43	128083	R09747	0.01	0.44	44.34	25.03	101.07	6.93	2
44	757368	AA437126	0.01	0.42	41.72	4.59	109.53	11.05	2
45	1367900	AA810225	0.01	0.41	41.11	4.81	99.20	19.33	2
46	243181	H94482	0.01	0.36	35.62	5.91	88.28	12.68	2
47	196544	R91566	0.25	8.56	34.73	0.93	52.03	51.22	2
48	256911	N30098	0.01	0.25	34.44	20.19	73.72	9.41	2
49	1030613	AA608832	0.01	0.33	33.18	5.81	82.72	11.01	2
50	815861	AA485052	0.26	7.89	30.35	0.77	34.54	55.73	2
51	1455835	AA863292	0.01	0.40	29.16	9.10	30.24	48.14	2
52	108378	T77729	0.01	0.41	29.13	7.73	36.47	43.19	2
53	1391682	AA789328	0.02	0.44	28.83	5.99	65.78	14.72	2
54	53039	R15740	0.01	0.27	27.34	0.74	70.25	11.03	2
55	796549	AA460274	0.01	0.27	27.13	1.21	69.04	11.15	2
56	194318	H50655	0.53	14.38	26.99	0.69	27.83	52.45	2
57	768056	AA418903	0.01	0.16	26.24	7.36	35.03	36.33	2
58	280699	N47445	0.55	14.15	25.90	2.28	11.75	63.66	2
59	38344	R49555	0.01	0.24	25.84	5.18	58.23	14.11	2
60	283379	N52767	0.02	0.39	25.65	0.59	66.04	10.31	2
61	430255	AA010383	0.01	0.25	25.24	4.46	54.64	16.63	2
62	687972	AA236986	0.01	0.17	25.09	3.61	60.05	11.62	2
63	357884	W94486	0.01	0.25	24.95	2.32	41.17	31.35	2
64	172517	H19826	1.00	24.91	24.86	2.27	26.82	45.50	2

Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes Upregulated 10 fold or more in at least 2 cancer cell lines.

65	251806	H96647	0.01	0.24	24.50	1.76	60.48	11.25	2
66	824025	AA490945	0.31	7.41	24.24	0.95	28.65	43.13	2
67	23345	R39191	0.01	0.16	23.97	44.37	17.55	9.98	2
68	825606	AA504625	0.15	3.51	23.68	0.87	21.91	48.25	2
69	284714	N63057	0.01	0.16	23.01	8.11	34.50	26.43	2
70	81050	T70198	0.01	0.23	23.00	1.00	42.67	25.34	2
71	855910	AA630328	0.01	0.16	22.37	4.98	30.37	31.76	2
72	34204	R44936	0.17	3.74	22.30	3.82	51.95	11.14	2
73	824270	AA491261	0.17	3.65	21.71	0.88	10.05	54.20	2
74	46843	H10072	0.01	0.14	21.70	39.83	1.50	23.77	2
75	79000	T61938	1.90	40.77	21.44	37.52	23.72	3.08	2
76	259884	N32904	0.91	19.16	20.97	4.40	10.88	47.62	2
77	270975	N32542	0.01	0.20	20.40	5.36	33.42	22.42	2
78	686552	AA255954	0.30	6.19	20.39	0.93	42.76	17.48	2
79	51916	H22563	0.12	2.46	20.27	20.94	30.57	9.30	2
80	199337	R95684	0.20	3.94	20.04	1.29	30.54	28.27	2
81	795831	AA461508	0.01	0.20	19.97	1.00	38.72	20.17	2
82	197265	R86970	0.01	0.20	19.50	2.79	10.31	45.41	2
83	40010	R54036	0.01	0.19	19.50	7.04	11.18	40.27	2
84	162310	H28091	0.17	3.30	19.47	2.35	30.81	25.26	2
85	80338	T65736	1.11	21.01	18.93	41.41	14.31	1.08	2
86	39722	R54492	0.01	0.17	18.85	3.39	10.12	43.06	2
87	489076	AA057195	0.02	0.35	18.01	4.49	38.83	10.71	2
88	361899	AA001376	0.01	0.17	17.44	1.97	34.15	16.22	2
89	435099	AA701315	0.01	0.21	17.36	7.52	33.82	10.73	2
90	67440	T49355	1.96	33.78	17.25	25.95	8.91	16.88	2
91	1410444	AA857163	0.06	1.06	17.19	1.87	37.48	12.21	2
92	280155	N47012	0.04	0.63	17.15	5.64	11.78	34.04	2
93	454083	AA676998	0.01	0.17	16.89	8.16	10.67	31.84	2
94	756829	AA481481	0.01	0.11	16.78	14.65	1.51	34.18	2
95	358990	W92263	0.01	0.16	16.35	10.47	5.09	33.48	2
96	357373	W93717	0.70	11.31	16.17	5.81	15.89	26.82	2
97	825726	AA504838	0.19	2.94	15.84	2.63	16.52	28.36	2
98	746232	AA417713	0.38	5.98	15.64	0.69	21.09	25.15	2
99	487766	AA045175	0.02	0.30	15.57	4.69	22.78	19.22	2

Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line: Genes upregulated 10 fold or more in at least 2 cancer cell lines.

100	811768	AA463445	0.26	3.91	15.03	1.53	28.43	15.13	2
101	51599	H18932	0.26	3.94	14.95	0.42	26.10	18.34	2
102	250069	H97140	0.02	0.35	14.92	5.14	24.61	15.00	2
103	28298	R40434	0.02	0.35	14.61	5.11	16.46	22.27	2
104	785293	AA476543	0.11	1.64	14.41	24.69	3.02	15.54	2
105	770860	AA434388	0.01	0.14	14.40	1.00	18.93	23.25	2
106	1481609	AA883800	0.25	3.51	14.24	10.07	4.19	28.45	2
107	418004	W90705	0.30	4.17	13.89	2.99	11.04	27.66	2
108	41406	R56149	0.01	0.13	13.76	17.85	18.97	4.48	2
109	1035796	AA628867	1.14	15.63	13.71	10.64	9.76	20.74	2
110	26806	R37738	0.10	1.31	13.68	2.42	26.44	12.18	2
111	502003	AA128617	0.01	0.17	13.58	7.33	15.99	17.41	2
112	771004	AA427719	0.29	3.95	13.50	0.64	21.58	18.27	2
113	415089	W93379	0.65	8.63	13.24	8.23	12.04	19.45	2
114	824074	AA491227	0.02	0.26	13.22	3.39	18.08	18.18	2
115	51103	H19217	0.02	0.23	13.14	14.72	17.85	6.86	2
116	284288	N52193	0.01	0.08	13.00	10.97	1.54	26.50	2
117	361122	AA017379	0.01	0.13	12.88	0.65	12.28	25.70	2
118	244050	N34042	0.01	0.17	12.88	5.65	21.72	11.26	2
119	795446	AA453616	0.01	0.13	12.56	22.57	14.55	0.58	2
120	1049185	AA620697	0.76	9.44	12.39	10.40	0.39	26.39	2
121	384352	AA022496	0.01	0.12	12.38	1.96	14.19	20.98	2
122	47264	H10713	0.30	3.72	12.36	2.11	23.87	11.09	2
123	686172	AA262211	1.18	14.39	12.18	5.65	13.80	17.09	2
124	1049079	AA778717	0.03	0.31	12.10	3.28	15.47	17.55	2
125	195845	R92201	0.14	1.69	12.02	1.00	14.95	20.10	2
126	451649	AA706901	1.40	16.82	11.98	4.34	18.70	12.88	2
127	739450	AA477227	1.99	23.53	11.82	2.08	17.13	16.24	2
128	46461	H09940	0.33	3.89	11.80	3.09	13.18	19.11	2
129	1030798	AA609002	0.03	0.31	11.73	10.15	8.33	16.72	2
130	591157	AA161188	0.02	0.18	11.71	0.58	20.54	14.01	2
131	33839	R44816	0.96	11.24	11.67	3.60	19.31	12.09	2
132	357138	W93523	0.02	0.20	11.63	10.87	20.61	3.40	2
133	366971	AA026682	2.38	27.64	11.61	3.65	10.18	20.99	2
134	592728	AA160670	0.03	0.34	11.17	0.33	16.85	16.34	2

Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line Genes Upregulated 10 fold or more in at least 2 cancer cell lines.

135	193333	H48070	0.36	3.90	10.90	0.92	17.96	13.80	2
136	753428	AA410434	0.57	6.12	10.84	0.51	15.37	16.62	2
137	298417	N74131	0.03	0.31	10.83	2.09	20.21	10.20	2
138	795840	AA461513	0.01	0.06	10.81	4.64	15.78	12.02	2
139	257955	N30751	0.86	9.32	10.79	2.05	10.22	20.10	2
140	788209	AA453433	0.01	0.09	10.70	11.07	8.10	12.92	2
141	204483	H58234	1.27	13.51	10.64	11.48	13.18	7.26	2
142	712401	AA281784	0.08	0.87	10.32	0.88	14.48	15.60	2
143	277621	N49389	0.54	5.55	10.21	0.77	14.23	15.64	2
144	590640	AA158035	0.01	0.12	10.11	11.51	17.15	1.65	2
145	197651	R94504	0.25	2.53	10.07	0.93	11.85	17.42	2
146	855391	AA664007	0.23	2.29	9.95	1.40	12.15	16.30	2
147	745490	AA625979	0.11	1.05	9.95	12.71	3.07	14.06	2
148	725877	AA292226	0.50	4.94	9.89	0.67	13.69	15.31	2
149	268135	N21633	0.39	3.82	9.87	1.10	17.62	10.88	2
150	433567	AA701652	0.02	0.16	9.57	11.04	10.28	7.37	2
151	35804	R46000	0.08	0.77	9.53	2.05	15.63	10.89	2
152	280375	N47113	1.12	10.61	9.52	11.98	10.79	5.79	2
153	303099	N90779	0.15	1.40	9.48	5.53	11.42	11.50	2
154	630013	AA219060	0.15	1.40	9.48	1.15	11.85	15.44	2
155	320495	W16859	0.01	0.09	9.47	10.45	1.00	16.97	2
156	700792	AA284072	0.01	0.06	9.34	11.43	1.54	15.06	2
157	281162	N50962	0.02	0.22	9.31	0.97	12.53	14.44	2
158	43733	H04789	0.11	1.03	9.24	10.06	12.44	5.24	2
159	461488	AA705047	0.10	0.97	9.22	12.49	10.86	4.33	2
160	781047	AA448462	1.08	9.89	9.17	4.58	11.63	11.30	2
161	199577	R96579	0.27	2.44	9.12	0.81	13.04	13.51	2
162	141726	R69584	0.03	0.26	9.09	3.46	10.73	13.08	2
163	320865	W44766	0.03	0.26	9.07	12.50	0.36	14.35	2
164	266259	N26515	0.35	3.21	9.06	1.65	10.87	14.67	2
165	594758	AA172056	1.30	11.71	9.03	12.54	13.45	1.10	2
166	951241	AA620485	1.98	17.81	8.98	10.05	0.30	16.60	2
167	342640	W68220	0.67	5.97	8.87	11.72	2.96	11.94	2
168	897546	AA496998	0.01	0.09	8.56	10.33	1.00	14.35	2
169	324717	W47364	1.13	9.51	8.39	1.45	12.46	11.27	2



Table 2-12: Prostate Cancer Cell Lines vs. Normal Prostatic Epithelial Cell Line. Genes upregulated 10 fold or more in at least 2 cancer cell lines.

170	825416	AA504265	0.40	3.36	8.39	1.30	11.51	12.36	2
171	380884	AA058576	0.18	1.49	8.21	2.23	11.14	11.26	2
172	451907	AA706968	2.08	15.11	7.27	11.07	0.08	10.67	2

**Table 3-1**

Sequence #	Accession #	Database	Sequence 52	AB033048	GENBANK
Sequence 1	A21185	GENBANK	Sequence 53	AB033114	GENBANK
Sequence 2	AB000509	GENBANK	Sequence 54	AD001528	GENBANK
Sequence 3	AB002329	GENBANK	Sequence 55	AF000986	GENBANK
Sequence 4	AB002357	GENBANK	Sequence 56	AF001893	GENBANK
Sequence 5	AB002366	GENBANK	Sequence 57	AF002715	GENBANK
Sequence 6	AB002387	GENBANK	Sequence 58	AF003837	GENBANK
Sequence 7	AB004304	GENBANK	Sequence 59	AF004561	GENBANK
Sequence 8	AB004788	GENBANK	Sequence 60	AF006085	GENBANK
Sequence 9	AB004903	GENBANK	Sequence 61	AF007791	GENBANK
Sequence 10	AB007870	GENBANK	Sequence 62	AF008442	GENBANK
Sequence 11	AB007899	GENBANK	Sequence 63	AF010235	GENBANK
Sequence 12	AB007930	GENBANK	Sequence 64	AF013988	GENBANK
Sequence 13	AB007941	GENBANK	Sequence 65	AF016266	GENBANK
Sequence 14	AB007956	GENBANK	Sequence 66	AF016270	GENBANK
Sequence 15	AB007957	GENBANK	Sequence 67	AF019226	GENBANK
Sequence 16	AB007960	GENBANK	Sequence 68	AF023259	GENBANK
Sequence 17	AB009284	GENBANK	Sequence 69	AF025840	GENBANK
Sequence 18	AB011108	GENBANK	Sequence 70	AF025998	GENBANK
Sequence 19	AB011132	GENBANK	Sequence 71	AF026939	GENBANK
Sequence 20	AB011140	GENBANK	Sequence 72	AF027824	GENBANK
Sequence 21	AB011155	GENBANK	Sequence 73	AF029890	GENBANK
Sequence 22	AB011159	GENBANK	Sequence 74	AF033095	GENBANK
Sequence 23	AB011164	GENBANK	Sequence 75	AF034607	GENBANK
Sequence 24	AB011472	GENBANK	Sequence 76	AF035296	GENBANK
Sequence 25	AB012130	GENBANK	Sequence 77	AF035298	GENBANK
Sequence 26	AB012910	GENBANK	Sequence 78	AF035309	GENBANK
Sequence 27	AB014521	GENBANK	Sequence 79	AF038404	GENBANK
Sequence 28	AB014589	GENBANK	Sequence 80	AF038957	GENBANK
Sequence 29	AB017007	GENBANK	Sequence 81	AF038960	GENBANK
Sequence 30	AB018268	GENBANK	Sequence 82	AF039703	GENBANK
Sequence 31	AB018305	GENBANK	Sequence 83	AF039918	GENBANK
Sequence 32	AB018327	GENBANK	Sequence 84	AF042331	GENBANK
Sequence 33	AB018344	GENBANK	Sequence 85	AF044588	GENBANK
Sequence 34	AB018351	GENBANK	Sequence 86	AF045167	GENBANK
Sequence 35	AB019568	GENBANK	Sequence 87	AF045184	GENBANK
Sequence 36	AB020637	GENBANK	Sequence 88	AF047020	GENBANK
Sequence 37	AB020669	GENBANK	Sequence 89	AF047472	GENBANK
Sequence 38	AB020680	GENBANK	Sequence 90	AF048977	GENBANK
Sequence 39	AB020682	GENBANK	Sequence 91	AF050171	GENBANK
Sequence 40	AB020692	GENBANK	Sequence 92	AF052124	GENBANK
Sequence 41	AB020723	GENBANK	Sequence 93	AF052164	GENBANK
Sequence 42	AB020981	GENBANK	Sequence 94	AF052182	GENBANK
Sequence 43	AB021288	GENBANK	Sequence 95	AF053470	GENBANK
Sequence 44	AB023153	GENBANK	Sequence 96	AF054179	GENBANK
Sequence 45	AB023206	GENBANK	Sequence 97	AF054187	GENBANK
Sequence 46	AB023227	GENBANK	Sequence 98	AF054838	GENBANK
Sequence 47	AB024704	GENBANK	Sequence 99	AF054990	GENBANK
Sequence 48	AB028624	GENBANK	Sequence 100	AF055012	GENBANK
Sequence 49	AB029000	GENBANK	Sequence 101	AF057160	GENBANK
Sequence 50	AB029004	GENBANK	Sequence 102	AF061258	GENBANK
Sequence 51	AB033020	GENBANK	Sequence 103	AF061938	GENBANK

# Table 3-1

Sequence 104	AF067656	GENBANK	Sequence 156	AF155832	GENBANK
Sequence 105	AF067972	GENBANK	Sequence 157	AF159056	GENBANK
Sequence 106	AF068846	GENBANK	Sequence 158	AF176574	GENBANK
Sequence 107	AF069601	GENBANK	Sequence 159	AF182645	GENBANK
Sequence 108	AF070523	GENBANK	Sequence 160	AF188745	GENBANK
Sequence 109	AF070555	GENBANK	Sequence 161	AF192979	GENBANK
Sequence 110	AF070561	GENBANK	Sequence 162	AJ001306	GENBANK
Sequence 111	AF070655	GENBANK	Sequence 163	AJ004913	GENBANK
Sequence 112	AF070657	GENBANK	Sequence 164	AJ004955	GENBANK
Sequence 113	AF070664	GENBANK	Sequence 165	AJ006470	GENBANK
Sequence 114	AF071202	GENBANK	Sequence 166	AJ006834	GENBANK
Sequence 115	AF071593	GENBANK	Sequence 167	AJ007398	GENBANK
Sequence 116	AF077030	GENBANK	Sequence 168	AJ010442	GENBANK
Sequence 117	AF077034	GENBANK	Sequence 169	AJ010444	GENBANK
Sequence 118	AF077367	GENBANK	Sequence 170	AJ012499	GENBANK
Sequence 119	AF083441	GENBANK	Sequence 171	AJ130733	GENBANK
Sequence 120	AF083470	GENBANK	Sequence 172	AJ224172	GENBANK
Sequence 121	AF085845	GENBANK	Sequence 173	AJ227918	GENBANK
Sequence 122	AF086003	GENBANK	Sequence 174	AJ228139	GENBANK
Sequence 123	AF086218	GENBANK	Sequence 175	AJ238095	GENBANK
Sequence 124	AF086336	GENBANK	Sequence 176	AJ250042	GENBANK
Sequence 125	AF086431	GENBANK	Sequence 177	AL049227	GENBANK
Sequence 126	AF086495	GENBANK	Sequence 178	AL049246	GENBANK
Sequence 127	AF086517	GENBANK	Sequence 179	AL049471	GENBANK
Sequence 128	AF086557	GENBANK	Sequence 180	AL049799	GENBANK
Sequence 129	AF087020	GENBANK	Sequence 181	AL049932	GENBANK
Sequence 130	AF087573	GENBANK	Sequence 182	AL049941	GENBANK
Sequence 131	AF088055	GENBANK	Sequence 183	AL049942	GENBANK
Sequence 132	AF091089	GENBANK	Sequence 184	AL049969	GENBANK
Sequence 133	AF093118	GENBANK	Sequence 185	AL049987	GENBANK
Sequence 134	AF100615	GENBANK	Sequence 186	AL050041	GENBANK
Sequence 135	AF100755	GENBANK	Sequence 187	AL050141	GENBANK
Sequence 136	AF100756	GENBANK	Sequence 188	AL050161	GENBANK
Sequence 137	AF101051	GENBANK	Sequence 189	AL050184	GENBANK
Sequence 138	AF103774	GENBANK	Sequence 190	AL050198	GENBANK
Sequence 139	AF103907	GENBANK	Sequence 191	AL080172	GENBANK
Sequence 140	AF106681	GENBANK	Sequence 192	AL080234	GENBANK
Sequence 141	AF110643	GENBANK	Sequence 193	AL096719	GENBANK
Sequence 142	AF112152	GENBANK	Sequence 194	AL110144	GENBANK
Sequence 143	AF114471	GENBANK	Sequence 195	AL110183	GENBANK
Sequence 144	AF119297	GENBANK	Sequence 196	AL110197	GENBANK
Sequence 145	AF124438	GENBANK	Sequence 197	AL110206	GENBANK
Sequence 146	AF128527	GENBANK	Sequence 198	AL110212	GENBANK
Sequence 147	AF134159	GENBANK	Sequence 199	AL117237	GENBANK
Sequence 148	AF139461	GENBANK	Sequence 200	AL117427	GENBANK
Sequence 149	AF147380	GENBANK	Sequence 201	AL117429	GENBANK
Sequence 150	AF151103	GENBANK	Sequence 202	AL117505	GENBANK
Sequence 151	AF151840	GENBANK	Sequence 203	AL117534	GENBANK
Sequence 152	AF151903	GENBANK	Sequence 204	AL117554	GENBANK
Sequence 153	AF152306	GENBANK	Sequence 205	AL117576	GENBANK
Sequence 154	AF153191	GENBANK	Sequence 206	AL117609	GENBANK
Sequence 155	AF155099	GENBANK	Sequence 207	AL117643	GENBANK

# Table 3-1

Sequence 208	AL133000	GENBANK	Sequence 260	J03209	GENBANK
Sequence 209	D00015	GENBANK	Sequence 261	J03250	GENBANK
Sequence 210	D00017	GENBANK	Sequence 262	J03464	GENBANK
Sequence 211	D13641	GENBANK	Sequence 263	J03779	GENBANK
Sequence 212	D14041	GENBANK	Sequence 264	J03799	GENBANK
Sequence 213	D14696	GENBANK	Sequence 265	J04164	GENBANK
Sequence 214	D16431	GENBANK	Sequence 266	J04621	GENBANK
Sequence 215	D25215	GENBANK	Sequence 267	J04970	GENBANK
Sequence 216	D26488	GENBANK	Sequence 268	J05021	GENBANK
Sequence 217	D28358	GENBANK	Sequence 269	J05032	GENBANK
Sequence 218	D28420	GENBANK	Sequence 270	K01911	GENBANK
Sequence 219	D28482	GENBANK	Sequence 271	K02765	GENBANK
Sequence 220	D29954	GENBANK	Sequence 272	L00160	GENBANK
Sequence 221	D29958	GENBANK	Sequence 273	L01439	GENBANK
Sequence 222	D30037	GENBANK	Sequence 274	L02426	GENBANK
Sequence 223	D31839	GENBANK	Sequence 275	L05425	GENBANK
Sequence 224	D37965	GENBANK	Sequence 276	L06133	GENBANK
Sequence 225	D38551	GENBANK	Sequence 277	L08441	GENBANK
Sequence 226	D38583	GENBANK	Sequence 278	L10678	GENBANK
Sequence 227	D42040	GENBANK	Sequence 279	L10910	GENBANK
Sequence 228	D43950	GENBANK	Sequence 280	L11066	GENBANK
Sequence 229	D50371	GENBANK	Sequence 281	L11932	GENBANK
Sequence 230	D63486	GENBANK	Sequence 282	L13210	GENBANK
Sequence 231	D63874	GENBANK	Sequence 283	L13385	GENBANK
Sequence 232	D80009	GENBANK	Sequence 284	L13773	GENBANK
Sequence 233	D83032	GENBANK	Sequence 285	L13799	GENBANK
Sequence 234	D83197	GENBANK	Sequence 286	L15702	GENBANK
Sequence 235	D83485	GENBANK	Sequence 287	L19161	GENBANK
Sequence 236	D84557	GENBANK	Sequence 288	L19605	GENBANK
Sequence 237	D86228	GENBANK	Sequence 289	L19872	GENBANK
Sequence 238	D86322	GENBANK	Sequence 290	L20941	GENBANK
Sequence 239	D87437	GENBANK	Sequence 291	L22569	GENBANK
Sequence 240	D87444	GENBANK	Sequence 292	L28010	GENBANK
Sequence 241	D87466	GENBANK	Sequence 293	L33930	GENBANK
Sequence 242	D87666	GENBANK	Sequence 294	L36642	GENBANK
Sequence 243	D87667	GENBANK	Sequence 295	L38941	GENBANK
Sequence 244	D87685	GENBANK	Sequence 296	L38961	GENBANK
Sequence 245	D87930	GENBANK	Sequence 297	L39833	GENBANK
Sequence 246	D89053	GENBANK	Sequence 298	L48984	GENBANK
Sequence 247	D89667	GENBANK	Sequence 299	M10119	GENBANK
Sequence 248	D89937	GENBANK	Sequence 300	M11119	GENBANK
Sequence 249	D90359	GENBANK	Sequence 301	M12670	GENBANK
Sequence 250	D90427	GENBANK	Sequence 302	M13231	GENBANK
Sequence 251	E01497	GENBANK	Sequence 303	M13692	GENBANK
Sequence 252	E01956	GENBANK	Sequence 304	M15661	GENBANK
Sequence 253	E01979	GENBANK	Sequence 305	M15885	GENBANK
Sequence 254	E02628	GENBANK	Sequence 306	M15887	GENBANK
Sequence 255	E02822	GENBANK	Sequence 307	M16247	GENBANK
Sequence 256	E02823	GENBANK	Sequence 308	M16342	GENBANK
Sequence 257	E06721	GENBANK	Sequence 309	M16660	GENBANK
Sequence 258	J00194	GENBANK	Sequence 310	M16768	GENBANK
Sequence 259	J03040	GENBANK	Sequence 311	M17324	GENBANK

# Table 3-1

Sequence 312	M17557	GENBANK	Sequence 364	U09848	GENBANK
Sequence 313	M17885	GENBANK	Sequence 365	U10439	GENBANK
Sequence 314	M18366	GENBANK	Sequence 366	U13616	GENBANK
Sequence 315	M21302	GENBANK	Sequence 367	U14394	GENBANK
Sequence 316	M22382	GENBANK	Sequence 368	U14510	GENBANK
Sequence 317	M22918	GENBANK	Sequence 369	U16799	GENBANK
Sequence 318	M22920	GENBANK	Sequence 370	U19557	GENBANK
Sequence 319	M24194	GENBANK	Sequence 371	U24105	GENBANK
Sequence 320	M24594	GENBANK	Sequence 372	U24704	GENBANK
Sequence 321	M24902	GENBANK	Sequence 373	U28964	GENBANK
Sequence 322	M25246	GENBANK	Sequence 374	U30521	GENBANK
Sequence 323	M26663	GENBANK	Sequence 375	U34252	GENBANK
Sequence 324	M27332	GENBANK	Sequence 376	U37143	GENBANK
Sequence 325	M27334	GENBANK	Sequence 377	U37283	GENBANK
Sequence 326	M27826	GENBANK	Sequence 378	U37519	GENBANK
Sequence 327	M28211	GENBANK	Sequence 379	U38654	GENBANK
Sequence 328	M28372	GENBANK	Sequence 380	U39360	GENBANK
Sequence 329	M29064	GENBANK	Sequence 381	U39840	GENBANK
Sequence 330	M29550	GENBANK	Sequence 382	U40671	GENBANK
Sequence 331	M29870	GENBANK	Sequence 383	U41515	GENBANK
Sequence 332	M34840	GENBANK	Sequence 384	U42594	GENBANK
Sequence 333	M36341	GENBANK	Sequence 385	U51134	GENBANK
Sequence 334	M37583	GENBANK	Sequence 386	U54558	GENBANK
Sequence 335	M55409	GENBANK	Sequence 387	U54831	GENBANK
Sequence 336	M55542	GENBANK	Sequence 388	U56255	GENBANK
Sequence 337	M55543	GENBANK	Sequence 389	U58855	GENBANK
Sequence 338	M58485	GENBANK	Sequence 390	U60975	GENBANK
Sequence 339	M59305	GENBANK	Sequence 391	U62961	GENBANK
Sequence 340	M62840	GENBANK	Sequence 392	U63810	GENBANK
Sequence 341	M63838	GENBANK	Sequence 393	U65928	GENBANK
Sequence 342	M69181	GENBANK	Sequence 394	U66616	GENBANK
Sequence 343	M74509	GENBANK	Sequence 395	U70735	GENBANK
Sequence 344	M74558	GENBANK	Sequence 396	U80034	GENBANK
Sequence 345	M74777	GENBANK	Sequence 397	U80743	GENBANK
Sequence 346	M76180	GENBANK	Sequence 398	U81001	GENBANK
Sequence 347	M77830	GENBANK	Sequence 399	U90028	GENBANK
Sequence 348	M80902	GENBANK	Sequence 400	U90144	GENBANK
Sequence 349	M83653	GENBANK	Sequence 401	U90916	GENBANK
Sequence 350	M83738	GENBANK	Sequence 402	V00478	GENBANK
Sequence 351	M83941	GENBANK	Sequence 403	X01742	GENBANK
Sequence 352	M85164	GENBANK	Sequence 404	X02422	GENBANK
Sequence 353	M87339	GENBANK	Sequence 405	X02457	GENBANK
Sequence 354	M92439	GENBANK	Sequence 406	X02544	GENBANK
Sequence 355	M94654	GENBANK	Sequence 407	X04098	GENBANK
Sequence 356	S70154	GENBANK	Sequence 408	X04412	GENBANK
Sequence 357	S71513	GENBANK	Sequence 409	X04470	GENBANK
Sequence 358	S82240	GENBANK	Sequence 410	X04503	GENBANK
Sequence 359	U02556	GENBANK	Sequence 411	X05276	GENBANK
Sequence 360	U03271	GENBANK	Sequence 412	X05332	GENBANK
Sequence 361	U07681	GENBANK	Sequence 413	X05908	GENBANK
Sequence 362	U08815	GENBANK	Sequence 414	X07695	GENBANK
Sequence 363	U09564	GENBANK	Sequence 415	X07820	GENBANK

# Table 3-1

Sequence 416	X12597	GENBANK	Sequence 468	Z74615	GENBANK
Sequence 417	X13425	GENBANK	Sequence 469	AA005035	dbEST
Sequence 418	X14420	GENBANK	Sequence 470	AA007280	dbEST
Sequence 419	X15187	GENBANK	Sequence 471	AA010019	dbEST
Sequence 420	X15729	GENBANK	Sequence 472	AA010083	dbEST
Sequence 421	X15822	GENBANK	Sequence 473	AA012927	dbEST
Sequence 422	X15880	GENBANK	Sequence 474	AA016274	dbEST
Sequence 423	X16940	GENBANK	Sequence 475	AA018892	dbEST
Sequence 424	X52022	GENBANK	Sequence 476	AA019498	dbEST
Sequence 425	X53280	GENBANK	Sequence 477	AA029415	dbEST
Sequence 426	X54941	GENBANK	Sequence 478	AA031483	dbEST
Sequence 427	X55525	GENBANK	Sequence 479	AA031762	dbEST
Sequence 428	X57810	GENBANK	Sequence 480	AA033869	dbEST
Sequence 429	X59618	GENBANK	Sequence 481	AA034226	dbEST
Sequence 430	X61970	GENBANK	Sequence 482	AA034237	dbEST
Sequence 431	X62744	GENBANK	Sequence 483	AA035742	dbEST
Sequence 432	X63432	GENBANK	Sequence 484	AA037126	dbEST
Sequence 433	X64875	GENBANK	Sequence 485	AA037172	dbEST
Sequence 434	X65550	GENBANK	Sequence 486	AA037554	dbEST
Sequence 435	X66276	GENBANK	Sequence 487	AA039354	dbEST
Sequence 436	X70326	GENBANK	Sequence 488	AA039504	dbEST
Sequence 437	X71087	GENBANK	Sequence 489	AA040209	dbEST
Sequence 438	X73114	GENBANK	Sequence 490	AA041494	dbEST
Sequence 439	X73902	GENBANK	Sequence 491	AA043431	dbEST
Sequence 440	X74801	GENBANK	Sequence 492	AA044187	dbEST
Sequence 441	X75593	GENBANK	Sequence 493	AA044209	dbEST
Sequence 442	X75861	GENBANK	Sequence 494	AA044416	dbEST
Sequence 443	X76180	GENBANK	Sequence 495	AA044691	dbEST
Sequence 444	X78926	GENBANK	Sequence 496	AA044960	dbEST
Sequence 445	X85372	GENBANK	Sequence 497	AA045584	dbEST
Sequence 446	X87241	GENBANK	Sequence 498	AA047213	dbEST
Sequence 447	X90568	GENBANK	Sequence 499	AA047332	dbEST
Sequence 448	X90870	GENBANK	Sequence 500	AA047704	dbEST
Sequence 449	X91257	GENBANK	Sequence 501	AA053522	dbEST
Sequence 450	X94323	GENBANK	Sequence 502	AA054521	dbEST
Sequence 451	X94754	GENBANK	Sequence 503	AA056281	dbEST
Sequence 452	X95240	GENBANK	Sequence 504	AA056686	dbEST
Sequence 453	X95677	GENBANK	Sequence 505	AA071030	dbEST
Sequence 454	X99920	GENBANK	Sequence 506	AA074067	dbEST
Sequence 455	Y00052	GENBANK	Sequence 507	AA075008	dbEST
Sequence 456	Y00281	GENBANK	Sequence 508	AA075515	dbEST
Sequence 457	Y00361	GENBANK	Sequence 509	AA075645	dbEST
Sequence 458	Y00711	GENBANK	Sequence 510	AA075981	dbEST
Sequence 459	Y08915	GENBANK	Sequence 511	AA076171	dbEST
Sequence 460	Y09267	GENBANK	Sequence 512	AA076964	dbEST
Sequence 461	Y16241	GENBANK	Sequence 513	AA077283	dbEST
Sequence 462	Z11338	GENBANK	Sequence 514	AA079706	dbEST
Sequence 463	Z18538	GENBANK	Sequence 515	AA081788	dbEST
Sequence 464	Z23064	GENBANK	Sequence 516	AA081800	dbEST
Sequence 465	Z26317	GENBANK	Sequence 517	AA081973	dbEST
Sequence 466	Z29330	GENBANK	Sequence 518	AA082437	dbEST
Sequence 467	Z36785	GENBANK	Sequence 519	AA083654	dbEST

# Table 3-1

Sequence 520	AA086007	dbEST	Sequence 572	AA186733	dbEST
Sequence 521	AA088322	dbEST	Sequence 573	AA187659	dbEST
Sequence 522	AA088850	dbEST	Sequence 574	AA187817	dbEST
Sequence 523	AA092224	dbEST	Sequence 575	AA188918	dbEST
Sequence 524	AA099952	dbEST	Sequence 576	AA190676	dbEST
Sequence 525	AA100987	dbEST	Sequence 577	AA194988	dbEST
Sequence 526	AA101208	dbEST	Sequence 578	AA195560	dbEST
Sequence 527	AA113403	dbEST	Sequence 579	AA196978	dbEST
Sequence 528	AA115604	dbEST	Sequence 580	AA203237	dbEST
Sequence 529	AA120818	dbEST	Sequence 581	AA205870	dbEST
Sequence 530	AA121471	dbEST	Sequence 582	AA211498	dbEST
Sequence 531	AA121923	dbEST	Sequence 583	AA213548	dbEST
Sequence 532	AA125809	dbEST	Sequence 584	AA215800	dbEST
Sequence 533	AA125989	dbEST	Sequence 585	AA218858	dbEST
Sequence 534	AA126128	dbEST	Sequence 586	AA223425	dbEST
Sequence 535	AA127674	dbEST	Sequence 587	AA224230	dbEST
Sequence 536	AA128306	dbEST	Sequence 588	AA225025	dbEST
Sequence 537	AA128391	dbEST	Sequence 589	AA229993	dbEST
Sequence 538	AA129501	dbEST	Sequence 590	AA232738	dbEST
Sequence 539	AA129909	dbEST	Sequence 591	AA233867	dbEST
Sequence 540	AA132798	dbEST	Sequence 592	AA234149	dbEST
Sequence 541	AA132956	dbEST	Sequence 593	AA234464	dbEST
Sequence 542	AA133382	dbEST	Sequence 594	AA234646	dbEST
Sequence 543	AA133503	dbEST	Sequence 595	AA234667	dbEST
Sequence 544	AA134032	dbEST	Sequence 596	AA247638	dbEST
Sequence 545	AA134778	dbEST	Sequence 597	AA250846	dbEST
Sequence 546	AA135049	dbEST	Sequence 598	AA250854	dbEST
Sequence 547	AA135104	dbEST	Sequence 599	AA253248	dbEST
Sequence 548	AA136794	dbEST	Sequence 600	AA255577	dbEST
Sequence 549	AA136830	dbEST	Sequence 601	AA256290	dbEST
Sequence 550	AA148002	dbEST	Sequence 602	AA256297	dbEST
Sequence 551	AA149624	dbEST	Sequence 603	AA256591	dbEST
Sequence 552	AA150928	dbEST	Sequence 604	AA258003	dbEST
Sequence 553	AA156040	dbEST	Sequence 605	AA261968	dbEST
Sequence 554	AA159847	dbEST	Sequence 606	AA262683	dbEST
Sequence 555	AA160002	dbEST	Sequence 607	AA262783	dbEST
Sequence 556	AA161003	dbEST	Sequence 608	AA278357	dbEST
Sequence 557	AA164473	dbEST	Sequence 609	AA278785	dbEST
Sequence 558	AA165243	dbEST	Sequence 610	AA278956	dbEST
Sequence 559	AA165632	dbEST	Sequence 611	AA279145	dbEST
Sequence 560	AA165639	dbEST	Sequence 612	AA279262	dbEST
Sequence 561	AA166907	dbEST	Sequence 613	AA282956	dbEST
Sequence 562	AA169276	dbEST	Sequence 614	AA283112	dbEST
Sequence 563	AA169638	dbEST	Sequence 615	AA285043	dbEST
Sequence 564	AA171516	dbEST	Sequence 616	AA291436	dbEST
Sequence 565	AA171872	dbEST	Sequence 617	AA292132	dbEST
Sequence 566	AA179105	dbEST	Sequence 618	AA292281	dbEST
Sequence 567	AA180270	dbEST	Sequence 619	AA293027	dbEST
Sequence 568	AA181526	dbEST	Sequence 620	AA295182	dbEST
Sequence 569	AA181580	dbEST	Sequence 621	AA295996	dbEST
Sequence 570	AA182409	dbEST	Sequence 622	AA297432	dbEST
Sequence 571	AA186538	dbEST	Sequence 623	AA298085	dbEST

# Table 3-1

Sequence 624	AA298773	dbEST	Sequence 670	AA417324	dbEST
Sequence 625	AA298794	dbEST	Sequence 677	AA418061	dbEST
Sequence 626	AA300440	dbEST	Sequence 678	AA418080	dbEST
Sequence 627	AA303257	dbEST	Sequence 679	AA418681	dbEST
Sequence 628	AA304979	dbEST	Sequence 680	AA419263	dbEST
Sequence 629	AA305319	dbEST	Sequence 681	AA421682	dbEST
Sequence 630	AA305494	dbEST	Sequence 682	AA423943	dbEST
Sequence 631	AA306772	dbEST	Sequence 683	AA425218	dbEST
Sequence 632	AA307286	dbEST	Sequence 684	AA425619	dbEST
Sequence 633	AA307539	dbEST	Sequence 685	AA428329	dbEST
Sequence 634	AA307857	dbEST	Sequence 686	AA429721	dbEST
Sequence 635	AA309002	dbEST	Sequence 687	AA430381	dbEST
Sequence 636	AA309127	dbEST	Sequence 688	AA430400	dbEST
Sequence 637	AA310469	dbEST	Sequence 689	AA431226	dbEST
Sequence 638	AA311028	dbEST	Sequence 690	AA432075	dbEST
Sequence 639	AA312078	dbEST	Sequence 691	AA435887	dbEST
Sequence 640	AA312962	dbEST	Sequence 692	AA436765	dbEST
Sequence 641	AA313164	dbEST	Sequence 693	AA443154	dbEST
Sequence 642	AA313653	dbEST	Sequence 694	AA443806	dbEST
Sequence 643	AA313692	dbEST	Sequence 695	AA443870	dbEST
Sequence 644	AA313922	dbEST	Sequence 696	AA447116	dbEST
Sequence 645	AA315049	dbEST	Sequence 697	AA448195	dbEST
Sequence 646	AA316207	dbEST	Sequence 698	AA449632	dbEST
Sequence 647	AA318284	dbEST	Sequence 699	AA449922	dbEST
Sequence 648	AA319601	dbEST	Sequence 700	AA453486	dbEST
Sequence 649	AA319870	dbEST	Sequence 701	AA453555	dbEST
Sequence 650	AA329658	dbEST	Sequence 702	AA456419	dbEST
Sequence 651	AA334754	dbEST	Sequence 703	AA456737	dbEST
Sequence 652	AA340635	dbEST	Sequence 704	AA458921	dbEST
Sequence 653	AA342701	dbEST	Sequence 705	AA459208	dbEST
Sequence 654	AA345906	dbEST	Sequence 706	AA459210	dbEST
Sequence 655	AA348669	dbEST	Sequence 707	AA461307	dbEST
Sequence 656	AA352926	dbEST	Sequence 708	AA464952	dbEST
Sequence 657	AA355890	dbEST	Sequence 709	AA465450	dbEST
Sequence 658	AA357574	dbEST	Sequence 710	AA468335	dbEST
Sequence 659	AA360977	dbEST	Sequence 711	AA468839	dbEST
Sequence 660	AA361225	dbEST	Sequence 712	AA476392	dbEST
Sequence 661	AA363049	dbEST	Sequence 713	AA477288	dbEST
Sequence 662	AA371483	dbEST	Sequence 714	AA477856	dbEST
Sequence 663	AA376277	dbEST	Sequence 715	AA478258	dbEST
Sequence 664	AA376668	dbEST	Sequence 716	AA478842	dbEST
Sequence 665	AA386326	dbEST	Sequence 717	AA481047	dbEST
Sequence 666	AA398214	dbEST	Sequence 718	AA482430	dbEST
Sequence 667	AA398463	dbEST	Sequence 719	AA482434	dbEST
Sequence 668	AA398674	dbEST	Sequence 720	AA483635	dbEST
Sequence 669	AA399177	dbEST	Sequence 721	AA488468	dbEST
Sequence 670	AA399265	dbEST	Sequence 722	AA488892	dbEST
Sequence 671	AA400279	dbEST	Sequence 723	AA489012	dbEST
Sequence 672	AA401208	dbEST	Sequence 724	AA489032	dbEST
Sequence 673	AA401285	dbEST	Sequence 725	AA490635	dbEST
Sequence 674	AA410580	dbEST	Sequence 726	AA492272	dbEST
Sequence 675	AA411736	dbEST	Sequence 727	AA492280	dbEST

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**Table 3-1**

Sequence 728	AA492392	dbEST	Sequence 780	AA586969	dbEST
Sequence 729	AA493512	dbEST	Sequence 781	AA587630	dbEST
Sequence 730	AA502979	dbEST	Sequence 782	AA594282	dbEST
Sequence 731	AA503330	dbEST	Sequence 783	AA594780	dbEST
Sequence 732	AA505400	dbEST	Sequence 784	AA594950	dbEST
Sequence 733	AA507314	dbEST	Sequence 785	AA599424	dbEST
Sequence 734	AA508804	dbEST	Sequence 786	AA599533	dbEST
Sequence 735	AA514933	dbEST	Sequence 787	AA602361	dbEST
Sequence 736	AA522686	dbEST	Sequence 788	AA602957	dbEST
Sequence 737	AA523252	dbEST	Sequence 789	AA604229	dbEST
Sequence 738	AA523677	dbEST	Sequence 790	AA610352	dbEST
Sequence 739	AA523708	dbEST	Sequence 791	AA617722	dbEST
Sequence 740	AA524023	dbEST	Sequence 792	AA620750	dbEST
Sequence 741	AA524462	dbEST	Sequence 793	AA622344	dbEST
Sequence 742	AA526151	dbEST	Sequence 794	AA628194	dbEST
Sequence 743	AA527570	dbEST	Sequence 795	AA629771	dbEST
Sequence 744	AA527805	dbEST	Sequence 796	AA630286	dbEST
Sequence 745	AA531044	dbEST	Sequence 797	AA631176	dbEST
Sequence 746	AA531255	dbEST	Sequence 798	AA631178	dbEST
Sequence 747	AA531563	dbEST	Sequence 799	AA631206	dbEST
Sequence 748	AA532377	dbEST	Sequence 800	AA632363	dbEST
Sequence 749	AA533575	dbEST	Sequence 801	AA641092	dbEST
Sequence 750	AA534873	dbEST	Sequence 802	AA643720	dbEST
Sequence 751	AA541537	dbEST	Sequence 803	AA644237	dbEST
Sequence 752	AA541677	dbEST	Sequence 804	AA649627	dbEST
Sequence 753	AA548098	dbEST	Sequence 805	AA653508	dbEST
Sequence 754	AA548244	dbEST	Sequence 806	AA654995	dbEST
Sequence 755	AA548600	dbEST	Sequence 807	AA657463	dbEST
Sequence 756	AA551005	dbEST	Sequence 808	AA662702	dbEST
Sequence 757	AA553789	dbEST	Sequence 809	AA665901	dbEST
Sequence 758	AA554010	dbEST	Sequence 810	AA669976	dbEST
Sequence 759	AA554598	dbEST	Sequence 811	AA683314	dbEST
Sequence 760	AA554718	dbEST	Sequence 812	AA687495	dbEST
Sequence 761	AA555227	dbEST	Sequence 813	AA702422	dbEST
Sequence 762	AA558280	dbEST	Sequence 814	AA704005	dbEST
Sequence 763	AA564843	dbEST	Sequence 815	AA705061	dbEST
Sequence 764	AA565334	dbEST	Sequence 816	AA713580	dbEST
Sequence 765	AA568406	dbEST	Sequence 817	AA722823	dbEST
Sequence 766	AA572950	dbEST	Sequence 818	AA729119	dbEST
Sequence 767	AA573742	dbEST	Sequence 819	AA740151	dbEST
Sequence 768	AA574397	dbEST	Sequence 820	AA744239	dbEST
Sequence 769	AA576425	dbEST	Sequence 821	AA745059	dbEST
Sequence 770	AA577326	dbEST	Sequence 822	AA745616	dbEST
Sequence 771	AA577557	dbEST	Sequence 823	AA746353	dbEST
Sequence 772	AA578773	dbEST	Sequence 824	AA748038	dbEST
Sequence 773	AA579835	dbEST	Sequence 825	AA748444	dbEST
Sequence 774	AA581829	dbEST	Sequence 826	AA748525	dbEST
Sequence 775	AA583431	dbEST	Sequence 827	AA758592	dbEST
Sequence 776	AA583567	dbEST	Sequence 828	AA767439	dbEST
Sequence 777	AA583773	dbEST	Sequence 829	AA769127	dbEST
Sequence 778	AA583899	dbEST	Sequence 830	AA769937	dbEST
Sequence 779	AA583997	dbEST	Sequence 831	AA774523	dbEST

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Sequence 832	AA774750	dbEST	Sequence 884	AA988468	dbEST
Sequence 833	AA777489	dbEST	Sequence 885	AA992583	dbEST
Sequence 834	AA779728	dbEST	Sequence 886	AA992596	dbEST
Sequence 835	AA779949	dbEST	Sequence 887	AA993550	dbEST
Sequence 836	AA782592	dbEST	Sequence 888	AF001542	dbEST
Sequence 837	AA806040	dbEST	Sequence 889	AF010244	dbEST
Sequence 838	AA814414	dbEST	Sequence 890	AF156972	dbEST
Sequence 839	AA826906	dbEST	Sequence 891	AI003778	dbEST
Sequence 840	AA827331	dbEST	Sequence 892	AI016113	dbEST
Sequence 841	AA834102	dbEST	Sequence 893	AI016417	dbEST
Sequence 842	AA834946	dbEST	Sequence 894	AI017236	dbEST
Sequence 843	AA845374	dbEST	Sequence 895	AI018468	dbEST
Sequence 844	AA847210	dbEST	Sequence 896	AI018578	dbEST
Sequence 845	AA854319	dbEST	Sequence 897	AI021925	dbEST
Sequence 846	AA858389	dbEST	Sequence 898	AI022353	dbEST
Sequence 847	AA858396	dbEST	Sequence 899	AI026819	dbEST
Sequence 848	AA860287	dbEST	Sequence 900	AI027232	dbEST
Sequence 849	AA861428	dbEST	Sequence 901	AI031819	dbEST
Sequence 850	AA861631	dbEST	Sequence 902	AI033904	dbEST
Sequence 851	AA872729	dbEST	Sequence 903	AI038986	dbEST
Sequence 852	AA873110	dbEST	Sequence 904	AI041820	dbEST
Sequence 853	AA877864	dbEST	Sequence 905	AI042290	dbEST
Sequence 854	AA878781	dbEST	Sequence 906	AI051987	dbEST
Sequence 855	AA883580	dbEST	Sequence 907	AI052124	dbEST
Sequence 856	AA884922	dbEST	Sequence 908	AI052525	dbEST
Sequence 857	AA888121	dbEST	Sequence 909	AI064691	dbEST
Sequence 858	AA888589	dbEST	Sequence 910	AI074713	dbEST
Sequence 859	AA890660	dbEST	Sequence 911	AI075189	dbEST
Sequence 860	AA906652	dbEST	Sequence 912	AI075211	dbEST
Sequence 861	AA910369	dbEST	Sequence 913	AI079329	dbEST
Sequence 862	AA911154	dbEST	Sequence 914	AI080377	dbEST
Sequence 863	AA911317	dbEST	Sequence 915	AI082168	dbEST
Sequence 864	AA918023	dbEST	Sequence 916	AI084457	dbEST
Sequence 865	AA918993	dbEST	Sequence 917	AI084466	dbEST
Sequence 866	AA923172	dbEST	Sequence 918	AI089525	dbEST
Sequence 867	AA926926	dbEST	Sequence 919	AI090623	dbEST
Sequence 868	AA928420	dbEST	Sequence 920	AI091425	dbEST
Sequence 869	AA934879	dbEST	Sequence 921	AI092428	dbEST
Sequence 870	AA935798	dbEST	Sequence 922	AI092766	dbEST
Sequence 871	AA936187	dbEST	Sequence 923	AI093553	dbEST
Sequence 872	AA946995	dbEST	Sequence 924	AI094010	dbEST
Sequence 873	AA953328	dbEST	Sequence 925	AI094162	dbEST
Sequence 874	AA953391	dbEST	Sequence 926	AI110856	dbEST
Sequence 875	AA954939	dbEST	Sequence 927	AI110866	dbEST
Sequence 876	AA962550	dbEST	Sequence 928	AI114467	dbEST
Sequence 877	AA968756	dbEST	Sequence 929	AI126093	dbEST
Sequence 878	AA971700	dbEST	Sequence 930	AI127239	dbEST
Sequence 879	AA972625	dbEST	Sequence 931	AI129932	dbEST
Sequence 880	AA973273	dbEST	Sequence 932	AI133138	dbEST
Sequence 881	AA977226	dbEST	Sequence 933	AI133208	dbEST
Sequence 882	AA984043	dbEST	Sequence 934	AI133387	dbEST
Sequence 883	AA984690	dbEST	Sequence 935	AI141847	dbEST

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Sequence 936	AI14318	dbEST	Sequence 987	AI281509	dbEST
Sequence 937	AI143899	dbEST	Sequence 988	AI281762	dbEST
Sequence 938	AI148251	dbEST	Sequence 989	AI291206	dbEST
Sequence 939	AI151497	dbEST	Sequence 990	AI298716	dbEST
Sequence 940	AI161261	dbEST	Sequence 991	AI304947	dbEST
Sequence 941	AI161272	dbEST	Sequence 992	AI309238	dbEST
Sequence 942	AI167330	dbEST	Sequence 993	AI313352	dbEST
Sequence 943	AI174394	dbEST	Sequence 994	AI332459	dbEST
Sequence 944	AI189173	dbEST	Sequence 995	AI334996	dbEST
Sequence 945	AI189340	dbEST	Sequence 996	AI338817	dbEST
Sequence 946	AI189841	dbEST	Sequence 997	AI340582	dbEST
Sequence 947	AI198317	dbEST	Sequence 998	AI343367	dbEST
Sequence 948	AI198416	dbEST	Sequence 999	AI359849	dbEST
Sequence 949	AI200830	dbEST	Sequence 1000	AI361377	dbEST
Sequence 950	AI207570	dbEST	Sequence 1001	AI366459	dbEST
Sequence 951	AI207628	dbEST	Sequence 1002	AI366549	dbEST
Sequence 952	AI214054	dbEST	Sequence 1003	AI368048	dbEST
Sequence 953	AI215841	dbEST	Sequence 1004	AI368114	dbEST
Sequence 954	AI216971	dbEST	Sequence 1005	AI371832	dbEST
Sequence 955	AI216979	dbEST	Sequence 1006	AI374643	dbEST
Sequence 956	AI216988	dbEST	Sequence 1007	AI374954	dbEST
Sequence 957	AI217003	dbEST	Sequence 1008	AI376808	dbEST
Sequence 958	AI217019	dbEST	Sequence 1009	AI378631	dbEST
Sequence 959	AI219116	dbEST	Sequence 1010	AI378902	dbEST
Sequence 960	AI220151	dbEST	Sequence 1011	AI379402	dbEST
Sequence 961	AI221894	dbEST	Sequence 1012	AI381351	dbEST
Sequence 962	AI223085	dbEST	Sequence 1013	AI382980	dbEST
Sequence 963	AI241212	dbEST	Sequence 1014	AI392607	dbEST
Sequence 964	AI242761	dbEST	Sequence 1015	AI399717	dbEST
Sequence 965	AI243343	dbEST	Sequence 1016	AI400752	dbEST
Sequence 966	AI249866	dbEST	Sequence 1017	AI421761	dbEST
Sequence 967	AI253330	dbEST	Sequence 1018	AI422243	dbEST
Sequence 968	AI253381	dbEST	Sequence 1019	AI431675	dbEST
Sequence 969	AI253436	dbEST	Sequence 1020	AI431869	dbEST
Sequence 970	AI261899	dbEST	Sequence 1021	AI432969	dbEST
Sequence 971	AI267162	dbEST	Sequence 1022	AI433717	dbEST
Sequence 972	AI267185	dbEST	Sequence 1023	AI439248	dbEST
Sequence 973	AI267282	dbEST	Sequence 1024	AI439762	dbEST
Sequence 974	AI267335	dbEST	Sequence 1025	AI445471	dbEST
Sequence 975	AI267417	dbEST	Sequence 1026	AI445592	dbEST
Sequence 976	AI267442	dbEST	Sequence 1027	AI458823	dbEST
Sequence 977	AI267454	dbEST	Sequence 1028	AI470061	dbEST
Sequence 978	AI267502	dbEST	Sequence 1029	AI473310	dbEST
Sequence 979	AI268430	dbEST	Sequence 1030	AI474750	dbEST
Sequence 980	AI269060	dbEST	Sequence 1031	AI492263	dbEST
Sequence 981	AI271740	dbEST	Sequence 1032	AI493961	dbEST
Sequence 982	AI272941	dbEST	Sequence 1033	AI524874	dbEST
Sequence 983	AI276322	dbEST	Sequence 1034	AI524991	dbEST
Sequence 984	AI276341	dbEST	Sequence 1035	AI557112	dbEST
Sequence 985	AI278838	dbEST	Sequence 1036	AI557116	dbEST
Sequence 986	AI280637	dbEST	Sequence 1037	AI557182	dbEST
Sequence 987	AI281509	dbEST	Sequence 1038	AI557225	dbEST
			Sequence 1039	AI557495	dbEST

# Table 3-1

Sequence 1040	AI5575	dbEST	Sequence 1092	AI753269	dbEST
Sequence 1041	AI557626	dbEST	Sequence 1093	AI754437	dbEST
Sequence 1042	AI559680	dbEST	Sequence 1094	AI755085	dbEST
Sequence 1043	AI564173	dbEST	Sequence 1095	AI763239	dbEST
Sequence 1044	AI564269	dbEST	Sequence 1096	AI768132	dbEST
Sequence 1045	AI569955	dbEST	Sequence 1097	AI792191	dbEST
Sequence 1046	AI571517	dbEST	Sequence 1098	AI792758	dbEST
Sequence 1047	AI571730	dbEST	Sequence 1099	AI799502	dbEST
Sequence 1048	AI573140	dbEST	Sequence 1100	AI800896	dbEST
Sequence 1049	AI573212	dbEST	Sequence 1101	AI804346	dbEST
Sequence 1050	AI582365	dbEST	Sequence 1102	AI804983	dbEST
Sequence 1051	AI587300	dbEST	Sequence 1103	AI810626	dbEST
Sequence 1052	AI588866	dbEST	Sequence 1104	AI811498	dbEST
Sequence 1053	AI589285	dbEST	Sequence 1105	AI814148	dbEST
Sequence 1054	AI589756	dbEST	Sequence 1106	AI815829	dbEST
Sequence 1055	AI613093	dbEST	Sequence 1107	AI819225	dbEST
Sequence 1056	AI623176	dbEST	Sequence 1108	AI819564	dbEST
Sequence 1057	AI623804	dbEST	Sequence 1109	AI819701	dbEST
Sequence 1058	AI624249	dbEST	Sequence 1110	AI859619	dbEST
Sequence 1059	AI624441	dbEST	Sequence 1111	AI869280	dbEST
Sequence 1060	AI628885	dbEST	Sequence 1112	AI879992	dbEST
Sequence 1061	AI631745	dbEST	Sequence 1113	AI890387	dbEST
Sequence 1062	AI634702	dbEST	Sequence 1114	AI890616	dbEST
Sequence 1063	AI635096	dbEST	Sequence 1115	AI911059	dbEST
Sequence 1064	AI654284	dbEST	Sequence 1116	AI914030	dbEST
Sequence 1065	AI654454	dbEST	Sequence 1117	AI914128	dbEST
Sequence 1066	AI655189	dbEST	Sequence 1118	AI916584	dbEST
Sequence 1067	AI656323	dbEST	Sequence 1119	AI922760	dbEST
Sequence 1068	AI658689	dbEST	Sequence 1120	AI923574	dbEST
Sequence 1069	AI680218	dbEST	Sequence 1121	AI927301	dbEST
Sequence 1070	AI680242	dbEST	Sequence 1122	AI936548	dbEST
Sequence 1071	AI682287	dbEST	Sequence 1123	AI952294	dbEST
Sequence 1072	AI683094	dbEST	Sequence 1124	AI955769	dbEST
Sequence 1073	AI683431	dbEST	Sequence 1125	AI984541	dbEST
Sequence 1074	AI684157	dbEST	Sequence 1126	AI984763	dbEST
Sequence 1075	AI688187	dbEST	Sequence 1127	AJ243229	dbEST
Sequence 1076	AI689722	dbEST	Sequence 1128	AL035998	dbEST
Sequence 1077	AI693493	dbEST	Sequence 1129	AL036354	dbEST
Sequence 1078	AI697849	dbEST	Sequence 1130	AL037724	dbEST
Sequence 1079	AI698198	dbEST	Sequence 1131	AL039293	dbEST
Sequence 1080	AI703405	dbEST	Sequence 1132	AL040084	dbEST
Sequence 1081	AI720403	dbEST	Sequence 1133	AL040993	dbEST
Sequence 1082	AI733862	dbEST	Sequence 1134	AL042815	dbEST
Sequence 1083	AI740534	dbEST	Sequence 1135	AL043346	dbEST
Sequence 1084	AI740792	dbEST	Sequence 1136	AL045297	dbEST
Sequence 1085	AI740796	dbEST	Sequence 1137	AL110357	dbEST
Sequence 1086	AI740900	dbEST	Sequence 1138	AL119728	dbEST
Sequence 1087	AI743852	dbEST	Sequence 1139	AW003247	dbEST
Sequence 1088	AI750535	dbEST	Sequence 1140	AW003967	dbEST
Sequence 1089	AI750567	dbEST	Sequence 1141	AW009562	dbEST
Sequence 1090	AI750846	dbEST	Sequence 1142	AW015055	dbEST
Sequence 1091	AI751565	dbEST	Sequence 1143	AW025074	dbEST

# Table 3-1

Sequence 1144	AW027280	dbEST	Sequence 1196	N99698	dbEST
Sequence 1145	AW027586	dbEST	Sequence 1197	R13761	dbEST
Sequence 1146	AW044029	dbEST	Sequence 1198	R33779	dbEST
Sequence 1147	AW044114	dbEST	Sequence 1199	R48977	dbEST
Sequence 1148	AW068491	dbEST	Sequence 1200	R50104	dbEST
Sequence 1149	AW090544	dbEST	Sequence 1201	R61734	dbEST
Sequence 1150	AW104641	dbEST	Sequence 1202	R64693	dbEST
Sequence 1151	AW118812	dbEST	Sequence 1203	R67466	dbEST
Sequence 1152	AW157303	dbEST	Sequence 1204	R70639	dbEST
Sequence 1153	AW170193	dbEST	Sequence 1205	R77186	dbEST
Sequence 1154	C04376	dbEST	Sequence 1206	R82429	dbEST
Sequence 1155	F07019	dbEST	Sequence 1207	R96147	dbEST
Sequence 1156	F07647	dbEST	Sequence 1208	R99043	dbEST
Sequence 1157	H02308	dbEST	Sequence 1209	T78419	dbEST
Sequence 1158	H03785	dbEST	Sequence 1210	T88702	dbEST
Sequence 1159	H08511	dbEST	Sequence 1211	W05463	dbEST
Sequence 1160	H08542	dbEST	Sequence 1212	W15477	dbEST
Sequence 1161	H08959	dbEST	Sequence 1213	W56388	dbEST
Sequence 1162	H10107	dbEST	Sequence 1214	W87522	dbEST
Sequence 1163	H10555	dbEST	Sequence 1215	W89057	dbEST
Sequence 1164	H12229	dbEST	Sequence 1216	Z25142	dbEST
Sequence 1165	H12519	dbEST	Sequence 1217	Z36731	dbEST
Sequence 1166	H14985	dbEST	Sequence 1218	Q37741	NUCPATENT
Sequence 1167	H22734	dbEST	Sequence 1219	T19093	NUCPATENT
Sequence 1168	H23157	dbEST	Sequence 1220	T59274	NUCPATENT
Sequence 1169	H26678	dbEST	Sequence 1221	V43261	NUCPATENT
Sequence 1170	H29664	dbEST	Sequence 1222	V43613	NUCPATENT
Sequence 1171	H38914	dbEST	Sequence 1223	V59617	NUCPATENT
Sequence 1172	H54680	dbEST	Sequence 1224	V62427	NUCPATENT
Sequence 1173	H57585	dbEST	Sequence 1225	V62428	NUCPATENT
Sequence 1174	H57648	dbEST	Sequence 1226	V63637	NUCPATENT
Sequence 1175	H61886	dbEST	Sequence 1227	V74172	NUCPATENT
Sequence 1176	H64719	dbEST	Sequence 1228	V84428	NUCPATENT
Sequence 1177	H73335	dbEST	Sequence 1229	X02974	NUCPATENT
Sequence 1178	H83784	dbEST	Sequence 1230	X03841	NUCPATENT
Sequence 1179	H84729	dbEST	Sequence 1231	X04408	NUCPATENT
Sequence 1180	H92106	dbEST	Sequence 1232	X22111	NUCPATENT
Sequence 1181	H94927	dbEST	Sequence 1233	X27262	NUCPATENT
Sequence 1182	H99611	dbEST	Sequence 1234	X27329	NUCPATENT
Sequence 1183	M62015	dbEST	Sequence 1235	X30167	NUCPATENT
Sequence 1184	N25751	dbEST	Sequence 1236	X37486	NUCPATENT
Sequence 1185	N28308	dbEST	Sequence 1237	X97677	NUCPATENT
Sequence 1186	N36968	dbEST	Sequence 1238	Z18356	NUCPATENT
Sequence 1187	N42196	dbEST	Sequence 1239	Z24611	NUCPATENT
Sequence 1188	N42772	dbEST	Sequence 1240	AC31093	PREPATNUC
Sequence 1189	N63991	dbEST			
Sequence 1190	N77277	dbEST	Sequence #	Accession #	Database
Sequence 1191	N78279	dbEST	Sequence 1241	A18657	GENBANK
Sequence 1192	N81205	dbEST	Sequence 1242	AB000095	GENBANK
Sequence 1193	N91096	dbEST	Sequence 1243	AB000220	GENBANK
Sequence 1194	N94855	dbEST	Sequence 1244	AB002366	GENBANK
Sequence 1195	N99553	dbEST	Sequence 1245	AB002387	GENBANK

# Table 3-1

Sequence 1246	AB002001	GENBANK	Sequence 1298	AF021819	GENBANK
Sequence 1247	AB007191	GENBANK	Sequence 1299	AF026166	GENBANK
Sequence 1248	AB007883	GENBANK	Sequence 1300	AF026291	GENBANK
Sequence 1249	AB008109	GENBANK	Sequence 1301	AF027824	GENBANK
Sequence 1250	AB009285	GENBANK	Sequence 1302	AF031647	GENBANK
Sequence 1251	AB010882	GENBANK	Sequence 1303	AF032885	GENBANK
Sequence 1252	AB011175	GENBANK	Sequence 1304	AF034759	GENBANK
Sequence 1253	AB013897	GENBANK	Sequence 1305	AF035286	GENBANK
Sequence 1254	AB014511	GENBANK	Sequence 1306	AF035537	GENBANK
Sequence 1255	AB014514	GENBANK	Sequence 1307	AF035839	GENBANK
Sequence 1256	AB014525	GENBANK	Sequence 1308	AF038451	GENBANK
Sequence 1257	AB014531	GENBANK	Sequence 1309	AF038963	GENBANK
Sequence 1258	AB014536	GENBANK	Sequence 1310	AF039918	GENBANK
Sequence 1259	AB014563	GENBANK	Sequence 1311	AF041260	GENBANK
Sequence 1260	AB014569	GENBANK	Sequence 1312	AF042346	GENBANK
Sequence 1261	AB014610	GENBANK	Sequence 1313	AF045167	GENBANK
Sequence 1262	AB018257	GENBANK	Sequence 1314	AF047020	GENBANK
Sequence 1263	AB018304	GENBANK	Sequence 1315	AF047185	GENBANK
Sequence 1264	AB018344	GENBANK	Sequence 1316	AF047440	GENBANK
Sequence 1265	AB019002	GENBANK	Sequence 1317	AF050637	GENBANK
Sequence 1266	AB019563	GENBANK	Sequence 1318	AF050638	GENBANK
Sequence 1267	AB019568	GENBANK	Sequence 1319	AF051941	GENBANK
Sequence 1268	AB020637	GENBANK	Sequence 1320	AF052138	GENBANK
Sequence 1269	AB020686	GENBANK	Sequence 1321	AF052153	GENBANK
Sequence 1270	AB020692	GENBANK	Sequence 1322	AF052159	GENBANK
Sequence 1271	AB020707	GENBANK	Sequence 1323	AF052183	GENBANK
Sequence 1272	AB021179	GENBANK	Sequence 1324	AF052642	GENBANK
Sequence 1273	AB021288	GENBANK	Sequence 1325	AF054284	GENBANK
Sequence 1274	AB022663	GENBANK	Sequence 1326	AF054838	GENBANK
Sequence 1275	AB023145	GENBANK	Sequence 1327	AF061258	GENBANK
Sequence 1276	AB028969	GENBANK	Sequence 1328	AF061737	GENBANK
Sequence 1277	AB029036	GENBANK	Sequence 1329	AF065388	GENBANK
Sequence 1278	AB032969	GENBANK	Sequence 1330	AF065391	GENBANK
Sequence 1279	AB032990	GENBANK	Sequence 1331	AF068180	GENBANK
Sequence 1280	AB033029	GENBANK	Sequence 1332	AF068235	GENBANK
Sequence 1281	AB033069	GENBANK	Sequence 1333	AF068754	GENBANK
Sequence 1282	AB033078	GENBANK	Sequence 1334	AF069762	GENBANK
Sequence 1283	AF001893	GENBANK	Sequence 1335	AF070523	GENBANK
Sequence 1284	AF004162	GENBANK	Sequence 1336	AF070553	GENBANK
Sequence 1285	AF004327	GENBANK	Sequence 1337	AF070561	GENBANK
Sequence 1286	AF004813	GENBANK	Sequence 1338	AF070562	GENBANK
Sequence 1287	AF006514	GENBANK	Sequence 1339	AF070595	GENBANK
Sequence 1288	AF007135	GENBANK	Sequence 1340	AF070626	GENBANK
Sequence 1289	AF007216	GENBANK	Sequence 1341	AF070650	GENBANK
Sequence 1290	AF007791	GENBANK	Sequence 1342	AF070658	GENBANK
Sequence 1291	AF008915	GENBANK	Sequence 1343	AF070668	GENBANK
Sequence 1292	AF010233	GENBANK	Sequence 1344	AF071202	GENBANK
Sequence 1293	AF015040	GENBANK	Sequence 1345	AF073298	GENBANK
Sequence 1294	AF016369	GENBANK	Sequence 1346	AF073475	GENBANK
Sequence 1295	AF020038	GENBANK	Sequence 1347	AF077029	GENBANK
Sequence 1296	AF020202	GENBANK	Sequence 1348	AF077032	GENBANK
Sequence 1297	AF020736	GENBANK	Sequence 1349	AF077045	GENBANK

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# Table 3-1

Sequence 1350	AF077260	GENBANK	Sequence 1402	AF191018	GENBANK
Sequence 1351	AF077367	GENBANK	Sequence 1403	AF191020	GENBANK
Sequence 1352	AF078845	GENBANK	Sequence 1404	AF193795	GENBANK
Sequence 1353	AF078847	GENBANK	Sequence 1405	AF195417	GENBANK
Sequence 1354	AF078860	GENBANK	Sequence 1406	AF201077	GENBANK
Sequence 1355	AF078862	GENBANK	Sequence 1407	AJ004913	GENBANK
Sequence 1356	AF084457	GENBANK	Sequence 1408	AJ006834	GENBANK
Sequence 1357	AF085844	GENBANK	Sequence 1409	AJ007398	GENBANK
Sequence 1358	AF085845	GENBANK	Sequence 1410	AJ007714	GENBANK
Sequence 1359	AF085850	GENBANK	Sequence 1411	AJ010071	GENBANK
Sequence 1360	AF086172	GENBANK	Sequence 1412	AJ130733	GENBANK
Sequence 1361	AF086336	GENBANK	Sequence 1413	AJ224172	GENBANK
Sequence 1362	AF086351	GENBANK	Sequence 1414	AJ224819	GENBANK
Sequence 1363	AF086418	GENBANK	Sequence 1415	AJ228139	GENBANK
Sequence 1364	AF086495	GENBANK	Sequence 1416	AL035304	GENBANK
Sequence 1365	AF086557	GENBANK	Sequence 1417	AL049233	GENBANK
Sequence 1366	AF090327	GENBANK	Sequence 1418	AL049252	GENBANK
Sequence 1367	AF091071	GENBANK	Sequence 1419	AL049325	GENBANK
Sequence 1368	AF093668	GENBANK	Sequence 1420	AL049447	GENBANK
Sequence 1369	AF095687	GENBANK	Sequence 1421	AL049969	GENBANK
Sequence 1370	AF098951	GENBANK	Sequence 1422	AL049987	GENBANK
Sequence 1371	AF100741	GENBANK	Sequence 1423	AL050018	GENBANK
Sequence 1372	AF100756	GENBANK	Sequence 1424	AL050041	GENBANK
Sequence 1373	AF102265	GENBANK	Sequence 1425	AL050089	GENBANK
Sequence 1374	AF102846	GENBANK	Sequence 1426	AL050197	GENBANK
Sequence 1375	AF103907	GENBANK	Sequence 1427	AL050198	GENBANK
Sequence 1376	AF111713	GENBANK	Sequence 1428	AL050255	GENBANK
Sequence 1377	AF112972	GENBANK	Sequence 1429	AL050265	GENBANK
Sequence 1378	AF113140	GENBANK	Sequence 1430	AL050272	GENBANK
Sequence 1379	AF117754	GENBANK	Sequence 1431	AL050290	GENBANK
Sequence 1380	AF117756	GENBANK	Sequence 1432	AL050373	GENBANK
Sequence 1381	AF118124	GENBANK	Sequence 1433	AL079298	GENBANK
Sequence 1382	AF125097	GENBANK	Sequence 1434	AL080063	GENBANK
Sequence 1383	AF125100	GENBANK	Sequence 1435	AL080089	GENBANK
Sequence 1384	AF125393	GENBANK	Sequence 1436	AL080135	GENBANK
Sequence 1385	AF126245	GENBANK	Sequence 1437	AL080144	GENBANK
Sequence 1386	AF129927	GENBANK	Sequence 1438	AL080224	GENBANK
Sequence 1387	AF131738	GENBANK	Sequence 1439	AL110183	GENBANK
Sequence 1388	AF131792	GENBANK	Sequence 1440	AL117237	GENBANK
Sequence 1389	AF132968	GENBANK	Sequence 1441	AL117412	GENBANK
Sequence 1390	AF138300	GENBANK	Sequence 1442	AL117423	GENBANK
Sequence 1391	AF143886	GENBANK	Sequence 1443	AL117429	GENBANK
Sequence 1392	AF147331	GENBANK	Sequence 1444	AL117516	GENBANK
Sequence 1393	AF151103	GENBANK	Sequence 1445	AL117543	GENBANK
Sequence 1394	AF151820	GENBANK	Sequence 1446	AL117554	GENBANK
Sequence 1395	AF151840	GENBANK	Sequence 1447	AL117584	GENBANK
Sequence 1396	AF151844	GENBANK	Sequence 1448	AL117595	GENBANK
Sequence 1397	AF151896	GENBANK	Sequence 1449	AL122079	GENBANK
Sequence 1398	AF153201	GENBANK	Sequence 1450	D00860	GENBANK
Sequence 1399	AF159056	GENBANK	Sequence 1451	D10040	GENBANK
Sequence 1400	AF176574	GENBANK	Sequence 1452	D13119	GENBANK
Sequence 1401	AF188745	GENBANK	Sequence 1453	D13286	GENBANK

**Table 3-1**

Sequence 1454	D13643	GENBANK	Sequence 1506	D89077	GENBANK
Sequence 1455	D13645	GENBANK	Sequence 1507	D89667	GENBANK
Sequence 1456	D13748	GENBANK	Sequence 1508	E01888	GENBANK
Sequence 1457	D13757	GENBANK	Sequence 1509	E01956	GENBANK
Sequence 1458	D13866	GENBANK	Sequence 1510	E02628	GENBANK
Sequence 1459	D13900	GENBANK	Sequence 1511	E03569	GENBANK
Sequence 1460	D14659	GENBANK	Sequence 1512	E03814	GENBANK
Sequence 1461	D14697	GENBANK	Sequence 1513	E05957	GENBANK
Sequence 1462	D14812	GENBANK	Sequence 1514	E08515	GENBANK
Sequence 1463	D15057	GENBANK	Sequence 1515	J02959	GENBANK
Sequence 1464	D16217	GENBANK	Sequence 1516	J03248	GENBANK
Sequence 1465	D16480	GENBANK	Sequence 1517	J03799	GENBANK
Sequence 1466	D17039	GENBANK	Sequence 1518	J04080	GENBANK
Sequence 1467	D17652	GENBANK	Sequence 1519	J04973	GENBANK
Sequence 1468	D21209	GENBANK	Sequence 1520	J05021	GENBANK
Sequence 1469	D21262	GENBANK	Sequence 1521	J05192	GENBANK
Sequence 1470	D23662	GENBANK	Sequence 1522	K01911	GENBANK
Sequence 1471	D25542	GENBANK	Sequence 1523	K03002	GENBANK
Sequence 1472	D28473	GENBANK	Sequence 1524	L02547	GENBANK
Sequence 1473	D29954	GENBANK	Sequence 1525	L06070	GENBANK
Sequence 1474	D30655	GENBANK	Sequence 1526	L07033	GENBANK
Sequence 1475	D31767	GENBANK	Sequence 1527	L07261	GENBANK
Sequence 1476	D31883	GENBANK	Sequence 1528	L07515	GENBANK
Sequence 1477	D31884	GENBANK	Sequence 1529	L08441	GENBANK
Sequence 1478	D31891	GENBANK	Sequence 1530	L11284	GENBANK
Sequence 1479	D37991	GENBANK	Sequence 1531	L11667	GENBANK
Sequence 1480	D38047	GENBANK	Sequence 1532	L12168	GENBANK
Sequence 1481	D38293	GENBANK	Sequence 1533	L13806	GENBANK
Sequence 1482	D38491	GENBANK	Sequence 1534	L14837	GENBANK
Sequence 1483	D38521	GENBANK	Sequence 1535	L14848	GENBANK
Sequence 1484	D38524	GENBANK	Sequence 1536	L16558	GENBANK
Sequence 1485	D43948	GENBANK	Sequence 1537	L19184	GENBANK
Sequence 1486	D43951	GENBANK	Sequence 1538	L19437	GENBANK
Sequence 1487	D44466	GENBANK	Sequence 1539	L20688	GENBANK
Sequence 1488	D50371	GENBANK	Sequence 1540	L31801	GENBANK
Sequence 1489	D50372	GENBANK	Sequence 1541	L34840	GENBANK
Sequence 1490	D50525	GENBANK	Sequence 1542	L37080	GENBANK
Sequence 1491	D50645	GENBANK	Sequence 1543	L38486	GENBANK
Sequence 1492	D61391	GENBANK	Sequence 1544	L38608	GENBANK
Sequence 1493	D63878	GENBANK	Sequence 1545	L38951	GENBANK
Sequence 1494	D63997	GENBANK	Sequence 1546	L42110	GENBANK
Sequence 1495	D82345	GENBANK	Sequence 1547	L47647	GENBANK
Sequence 1496	D83077	GENBANK	Sequence 1548	L49399	GENBANK
Sequence 1497	D86326	GENBANK	Sequence 1549	L77701	GENBANK
Sequence 1498	D86971	GENBANK	Sequence 1550	M10036	GENBANK
Sequence 1499	D86974	GENBANK	Sequence 1551	M10119	GENBANK
Sequence 1500	D86985	GENBANK	Sequence 1552	M11119	GENBANK
Sequence 1501	D87078	GENBANK	Sequence 1553	M13231	GENBANK
Sequence 1502	D87666	GENBANK	Sequence 1554	M13692	GENBANK
Sequence 1503	D87667	GENBANK	Sequence 1555	M14200	GENBANK
Sequence 1504	D88674	GENBANK	Sequence 1556	M15885	GENBANK
Sequence 1505	D89053	GENBANK	Sequence 1557	M15887	GENBANK



# Table 3-1

Sequence 1558	M16600	GENBANK	Sequence 1610	U12778	GENBANK
Sequence 1559	M16804	GENBANK	Sequence 1611	U14971	GENBANK
Sequence 1560	M17323	GENBANK	Sequence 1612	U17714	GENBANK
Sequence 1561	M17885	GENBANK	Sequence 1613	U18914	GENBANK
Sequence 1562	M20030	GENBANK	Sequence 1614	U21858	GENBANK
Sequence 1563	M20372	GENBANK	Sequence 1615	U24169	GENBANK
Sequence 1564	M21154	GENBANK	Sequence 1616	U25789	GENBANK
Sequence 1565	M21895	GENBANK	Sequence 1617	U28249	GENBANK
Sequence 1566	M21896	GENBANK	Sequence 1618	U30826	GENBANK
Sequence 1567	M22382	GENBANK	Sequence 1619	U31905	GENBANK
Sequence 1568	M22538	GENBANK	Sequence 1620	U33821	GENBANK
Sequence 1569	M22590	GENBANK	Sequence 1621	U38654	GENBANK
Sequence 1570	M22920	GENBANK	Sequence 1622	U38784	GENBANK
Sequence 1571	M23613	GENBANK	Sequence 1623	U39360	GENBANK
Sequence 1572	M24194	GENBANK	Sequence 1624	U41515	GENBANK
Sequence 1573	M24902	GENBANK	Sequence 1625	U43188	GENBANK
Sequence 1574	M26663	GENBANK	Sequence 1626	U48857	GENBANK
Sequence 1575	M27335	GENBANK	Sequence 1627	U51004	GENBANK
Sequence 1576	M27937	GENBANK	Sequence 1628	U51920	GENBANK
Sequence 1577	M28016	GENBANK	Sequence 1629	U66469	GENBANK
Sequence 1578	M28211	GENBANK	Sequence 1630	U66563	GENBANK
Sequence 1579	M31627	GENBANK	Sequence 1631	U68140	GENBANK
Sequence 1580	M34840	GENBANK	Sequence 1632	U70439	GENBANK
Sequence 1581	M36072	GENBANK	Sequence 1633	U71363	GENBANK
Sequence 1582	M37197	GENBANK	Sequence 1634	U77664	GENBANK
Sequence 1583	M55421	GENBANK	Sequence 1635	U78516	GENBANK
Sequence 1584	M58549	GENBANK	Sequence 1636	U79273	GENBANK
Sequence 1585	M59849	GENBANK	Sequence 1637	U80034	GENBANK
Sequence 1586	M60457	GENBANK	Sequence 1638	U80456	GENBANK
Sequence 1587	M61916	GENBANK	Sequence 1639	U84720	GENBANK
Sequence 1588	M63573	GENBANK	Sequence 1640	U90551	GENBANK
Sequence 1589	M64347	GENBANK	Sequence 1641	U97280	GENBANK
Sequence 1590	M74509	GENBANK	Sequence 1642	X00497	GENBANK
Sequence 1591	M74777	GENBANK	Sequence 1643	X02544	GENBANK
Sequence 1592	M82882	GENBANK	Sequence 1644	X04707	GENBANK
Sequence 1593	M83822	GENBANK	Sequence 1645	X05332	GENBANK
Sequence 1594	M84443	GENBANK	Sequence 1646	X06747	GENBANK
Sequence 1595	M88163	GENBANK	Sequence 1647	X13238	GENBANK
Sequence 1596	M90104	GENBANK	Sequence 1648	X13839	GENBANK
Sequence 1597	M90309	GENBANK	Sequence 1649	X15183	GENBANK
Sequence 1598	M97856	GENBANK	Sequence 1650	X15187	GENBANK
Sequence 1599	S39329	GENBANK	Sequence 1651	X15722	GENBANK
Sequence 1600	S69189	GENBANK	Sequence 1652	X15729	GENBANK
Sequence 1601	S69272	GENBANK	Sequence 1653	X17620	GENBANK
Sequence 1602	S70154	GENBANK	Sequence 1654	X52943	GENBANK
Sequence 1603	S73591	GENBANK	Sequence 1655	X53280	GENBANK
Sequence 1604	S78203	GENBANK	Sequence 1656	X53605	GENBANK
Sequence 1605	S82081	GENBANK	Sequence 1657	X56998	GENBANK
Sequence 1606	S82240	GENBANK	Sequence 1658	X59405	GENBANK
Sequence 1607	S94541	GENBANK	Sequence 1659	X60656	GENBANK
Sequence 1608	U00947	GENBANK	Sequence 1660	X60708	GENBANK
Sequence 1609	U07919	GENBANK	Sequence 1661	X61100	GENBANK

09768827 012401

# Table 3-1

Sequence 1662	X66276	GENBANK	Sequence 1714	AA035001	dbEST
Sequence 1663	X69086	GENBANK	Sequence 1715	AA035090	dbEST
Sequence 1664	X73114	GENBANK	Sequence 1716	AA037138	dbEST
Sequence 1665	X74070	GENBANK	Sequence 1717	AA037216	dbEST
Sequence 1666	X74331	GENBANK	Sequence 1718	AA037828	dbEST
Sequence 1667	X75861	GENBANK	Sequence 1719	AA037877	dbEST
Sequence 1668	X76013	GENBANK	Sequence 1720	AA040037	dbEST
Sequence 1669	X76732	GENBANK	Sequence 1721	AA040820	dbEST
Sequence 1670	X81900	GENBANK	Sequence 1722	AA044591	dbEST
Sequence 1671	X82125	GENBANK	Sequence 1723	AA046808	dbEST
Sequence 1672	X82157	GENBANK	Sequence 1724	AA046973	dbEST
Sequence 1673	X90583	GENBANK	Sequence 1725	AA047729	dbEST
Sequence 1674	X94323	GENBANK	Sequence 1726	AA053522	dbEST
Sequence 1675	X95240	GENBANK	Sequence 1727	AA054120	dbEST
Sequence 1676	X95325	GENBANK	Sequence 1728	AA056034	dbEST
Sequence 1677	X97335	GENBANK	Sequence 1729	AA056482	dbEST
Sequence 1678	X98743	GENBANK	Sequence 1730	AA063501	dbEST
Sequence 1679	Y00052	GENBANK	Sequence 1731	AA069079	dbEST
Sequence 1680	Y00282	GENBANK	Sequence 1732	AA069693	dbEST
Sequence 1681	Y08915	GENBANK	Sequence 1733	AA069784	dbEST
Sequence 1682	Y08991	GENBANK	Sequence 1734	AA071084	dbEST
Sequence 1683	Y12860	GENBANK	Sequence 1735	AA074818	dbEST
Sequence 1684	Y13286	GENBANK	Sequence 1736	AA075165	dbEST
Sequence 1685	Z11227	GENBANK	Sequence 1737	AA075257	dbEST
Sequence 1686	Z26248	GENBANK	Sequence 1738	AA075530	dbEST
Sequence 1687	Z29067	GENBANK	Sequence 1739	AA077906	dbEST
Sequence 1688	Z31696	GENBANK	Sequence 1740	AA078904	dbEST
Sequence 1689	Z36819	GENBANK	Sequence 1741	AA080889	dbEST
Sequence 1690	Z48633	GENBANK	Sequence 1742	AA081751	dbEST
Sequence 1691	Z68747	GENBANK	Sequence 1743	AA082087	dbEST
Sequence 1692	Z69043	GENBANK	Sequence 1744	AA082754	dbEST
Sequence 1693	AA001319	dbEST	Sequence 1745	AA083096	dbEST
Sequence 1694	AA001792	dbEST	Sequence 1746	AA083410	dbEST
Sequence 1695	AA002181	dbEST	Sequence 1747	AA085459	dbEST
Sequence 1696	AA004609	dbEST	Sequence 1748	AA085632	dbEST
Sequence 1697	AA010480	dbEST	Sequence 1749	AA088187	dbEST
Sequence 1698	AA010828	dbEST	Sequence 1750	AA088372	dbEST
Sequence 1699	AA013090	dbEST	Sequence 1751	AA088755	dbEST
Sequence 1700	AA017469	dbEST	Sequence 1752	AA093974	dbEST
Sequence 1701	AA017500	dbEST	Sequence 1753	AA094656	dbEST
Sequence 1702	AA018347	dbEST	Sequence 1754	AA095478	dbEST
Sequence 1703	AA025373	dbEST	Sequence 1755	AA098876	dbEST
Sequence 1704	AA026983	dbEST	Sequence 1756	AA099080	dbEST
Sequence 1705	AA027862	dbEST	Sequence 1757	AA099602	dbEST
Sequence 1706	AA029889	dbEST	Sequence 1758	AA099976	dbEST
Sequence 1707	AA029947	dbEST	Sequence 1759	AA100707	dbEST
Sequence 1708	AA031293	dbEST	Sequence 1760	AA100885	dbEST
Sequence 1709	AA031762	dbEST	Sequence 1761	AA101237	dbEST
Sequence 1710	AA032221	dbEST	Sequence 1762	AA102605	dbEST
Sequence 1711	AA033869	dbEST	Sequence 1763	AA114945	dbEST
Sequence 1712	AA034186	dbEST	Sequence 1764	AA114952	dbEST
Sequence 1713	AA034516	dbEST	Sequence 1765	AA115021	dbEST

# Table 3-1

Sequence 1766	AA115492	dbEST	Sequence 1818	AA187809	dbEST
Sequence 1767	AA115604	dbEST	Sequence 1819	AA188051	dbEST
Sequence 1768	AA120852	dbEST	Sequence 1820	AA188140	dbEST
Sequence 1769	AA122129	dbEST	Sequence 1821	AA190852	dbEST
Sequence 1770	AA126025	dbEST	Sequence 1822	AA190914	dbEST
Sequence 1771	AA126373	dbEST	Sequence 1823	AA191661	dbEST
Sequence 1772	AA127336	dbEST	Sequence 1824	AA193247	dbEST
Sequence 1773	AA127369	dbEST	Sequence 1825	AA195617	dbEST
Sequence 1774	AA128114	dbEST	Sequence 1826	AA195831	dbEST
Sequence 1775	AA130162	dbEST	Sequence 1827	AA196978	dbEST
Sequence 1776	AA130229	dbEST	Sequence 1828	AA203492	dbEST
Sequence 1777	AA130262	dbEST	Sequence 1829	AA204854	dbEST
Sequence 1778	AA130784	dbEST	Sequence 1830	AA205647	dbEST
Sequence 1779	AA131198	dbEST	Sequence 1831	AA205870	dbEST
Sequence 1780	AA131749	dbEST	Sequence 1832	AA206137	dbEST
Sequence 1781	AA131961	dbEST	Sequence 1833	AA206214	dbEST
Sequence 1782	AA132508	dbEST	Sequence 1834	AA207266	dbEST
Sequence 1783	AA132633	dbEST	Sequence 1835	AA210741	dbEST
Sequence 1784	AA132992	dbEST	Sequence 1836	AA210833	dbEST
Sequence 1785	AA133692	dbEST	Sequence 1837	AA210840	dbEST
Sequence 1786	AA134266	dbEST	Sequence 1838	AA218536	dbEST
Sequence 1787	AA134267	dbEST	Sequence 1839	AA223774	dbEST
Sequence 1788	AA134527	dbEST	Sequence 1840	AA224132	dbEST
Sequence 1789	AA135875	dbEST	Sequence 1841	AA224751	dbEST
Sequence 1790	AA136351	dbEST	Sequence 1842	AA224876	dbEST
Sequence 1791	AA136874	dbEST	Sequence 1843	AA225002	dbEST
Sequence 1792	AA143438	dbEST	Sequence 1844	AA225458	dbEST
Sequence 1793	AA143634	dbEST	Sequence 1845	AA225857	dbEST
Sequence 1794	AA146589	dbEST	Sequence 1846	AA226171	dbEST
Sequence 1795	AA147507	dbEST	Sequence 1847	AA226275	dbEST
Sequence 1796	AA148019	dbEST	Sequence 1848	AA226321	dbEST
Sequence 1797	AA148087	dbEST	Sequence 1849	AA226611	dbEST
Sequence 1798	AA156782	dbEST	Sequence 1850	AA226709	dbEST
Sequence 1799	AA156862	dbEST	Sequence 1851	AA227873	dbEST
Sequence 1800	AA157741	dbEST	Sequence 1852	AA228440	dbEST
Sequence 1801	AA159774	dbEST	Sequence 1853	AA229199	dbEST
Sequence 1802	AA159849	dbEST	Sequence 1854	AA229424	dbEST
Sequence 1803	AA159910	dbEST	Sequence 1855	AA229611	dbEST
Sequence 1804	AA165027	dbEST	Sequence 1856	AA230169	dbEST
Sequence 1805	AA165290	dbEST	Sequence 1857	AA232734	dbEST
Sequence 1806	AA165593	dbEST	Sequence 1858	AA232843	dbEST
Sequence 1807	AA166952	dbEST	Sequence 1859	AA233428	dbEST
Sequence 1808	AA167084	dbEST	Sequence 1860	AA234464	dbEST
Sequence 1809	AA167766	dbEST	Sequence 1861	AA234818	dbEST
Sequence 1810	AA167826	dbEST	Sequence 1862	AA235370	dbEST
Sequence 1811	AA169520	dbEST	Sequence 1863	AA235802	dbEST
Sequence 1812	AA169736	dbEST	Sequence 1864	AA236667	dbEST
Sequence 1813	AA173331	dbEST	Sequence 1865	AA236904	dbEST
Sequence 1814	AA173998	dbEST	Sequence 1866	AA242864	dbEST
Sequence 1815	AA180137	dbEST	Sequence 1867	AA243230	dbEST
Sequence 1816	AA182948	dbEST	Sequence 1868	AA243980	dbEST
Sequence 1817	AA187288	dbEST	Sequence 1869	AA244052	dbEST

# Table 3-1

Sequence 1870	AA249184	dbEST	Sequence 1922	AA313170	dbEST
Sequence 1871	AA251321	dbEST	Sequence 1923	AA313534	dbEST
Sequence 1872	AA253384	dbEST	Sequence 1924	AA313779	dbEST
Sequence 1873	AA256591	dbEST	Sequence 1925	AA314350	dbEST
Sequence 1874	AA258357	dbEST	Sequence 1926	AA314599	dbEST
Sequence 1875	AA259062	dbEST	Sequence 1927	AA314673	dbEST
Sequence 1876	AA261873	dbEST	Sequence 1928	AA315049	dbEST
Sequence 1877	AA262345	dbEST	Sequence 1929	AA315189	dbEST
Sequence 1878	AA278956	dbEST	Sequence 1930	AA315311	dbEST
Sequence 1879	AA280848	dbEST	Sequence 1931	AA316181	dbEST
Sequence 1880	AA283904	dbEST	Sequence 1932	AA316632	dbEST
Sequence 1881	AA284835	dbEST	Sequence 1933	AA317952	dbEST
Sequence 1882	AA284971	dbEST	Sequence 1934	AA318100	dbEST
Sequence 1883	AA285040	dbEST	Sequence 1935	AA320611	dbEST
Sequence 1884	AA285290	dbEST	Sequence 1936	AA322728	dbEST
Sequence 1885	AA290591	dbEST	Sequence 1937	AA322922	dbEST
Sequence 1886	AA291680	dbEST	Sequence 1938	AA324683	dbEST
Sequence 1887	AA292131	dbEST	Sequence 1939	AA325108	dbEST
Sequence 1888	AA292866	dbEST	Sequence 1940	AA325220	dbEST
Sequence 1889	AA293802	dbEST	Sequence 1941	AA329110	dbEST
Sequence 1890	AA296465	dbEST	Sequence 1942	AA331359	dbEST
Sequence 1891	AA297215	dbEST	Sequence 1943	AA332139	dbEST
Sequence 1892	AA297512	dbEST	Sequence 1944	AA332551	dbEST
Sequence 1893	AA298596	dbEST	Sequence 1945	AA336798	dbEST
Sequence 1894	AA298786	dbEST	Sequence 1946	AA340632	dbEST
Sequence 1895	AA298794	dbEST	Sequence 1947	AA342231	dbEST
Sequence 1896	AA299594	dbEST	Sequence 1948	AA344376	dbEST
Sequence 1897	AA300728	dbEST	Sequence 1949	AA345904	dbEST
Sequence 1898	AA301391	dbEST	Sequence 1950	AA347340	dbEST
Sequence 1899	AA301907	dbEST	Sequence 1951	AA351799	dbEST
Sequence 1900	AA303172	dbEST	Sequence 1952	AA354915	dbEST
Sequence 1901	AA303682	dbEST	Sequence 1953	AA355119	dbEST
Sequence 1902	AA303796	dbEST	Sequence 1954	AA357593	dbEST
Sequence 1903	AA303880	dbEST	Sequence 1955	AA358169	dbEST
Sequence 1904	AA304947	dbEST	Sequence 1956	AA360190	dbEST
Sequence 1905	AA305193	dbEST	Sequence 1957	AA361997	dbEST
Sequence 1906	AA305315	dbEST	Sequence 1958	AA362731	dbEST
Sequence 1907	AA305331	dbEST	Sequence 1959	AA365229	dbEST
Sequence 1908	AA305409	dbEST	Sequence 1960	AA366269	dbEST
Sequence 1909	AA305526	dbEST	Sequence 1961	AA369521	dbEST
Sequence 1910	AA305566	dbEST	Sequence 1962	AA370110	dbEST
Sequence 1911	AA306540	dbEST	Sequence 1963	AA370122	dbEST
Sequence 1912	AA306812	dbEST	Sequence 1964	AA370337	dbEST
Sequence 1913	AA307697	dbEST	Sequence 1965	AA373079	dbEST
Sequence 1914	AA307720	dbEST	Sequence 1966	AA374718	dbEST
Sequence 1915	AA307849	dbEST	Sequence 1967	AA375298	dbEST
Sequence 1916	AA308051	dbEST	Sequence 1968	AA375312	dbEST
Sequence 1917	AA308273	dbEST	Sequence 1969	AA376292	dbEST
Sequence 1918	AA308332	dbEST	Sequence 1970	AA382481	dbEST
Sequence 1919	AA310057	dbEST	Sequence 1971	AA384322	dbEST
Sequence 1920	AA311505	dbEST	Sequence 1972	AA384529	dbEST
Sequence 1921	AA312652	dbEST	Sequence 1973	AA384756	dbEST

# Table 3-1

Sequence 1974	AA385573	dbEST	Sequence 2026	AA451633	dbEST
Sequence 1975	AA386056	dbEST	Sequence 2027	AA453310	dbEST
Sequence 1976	AA386087	dbEST	Sequence 2028	AA453562	dbEST
Sequence 1977	AA393080	dbEST	Sequence 2029	AA453924	dbEST
Sequence 1978	AA393699	dbEST	Sequence 2030	AA455235	dbEST
Sequence 1979	AA397460	dbEST	Sequence 2031	AA456344	dbEST
Sequence 1980	AA398619	dbEST	Sequence 2032	AA458516	dbEST
Sequence 1981	AA400692	dbEST	Sequence 2033	AA459321	dbEST
Sequence 1982	AA402000	dbEST	Sequence 2034	AA459517	dbEST
Sequence 1983	AA402238	dbEST	Sequence 2035	AA461128	dbEST
Sequence 1984	AA404669	dbEST	Sequence 2036	AA464133	dbEST
Sequence 1985	AA406168	dbEST	Sequence 2037	AA464338	dbEST
Sequence 1986	AA406191	dbEST	Sequence 2038	AA464568	dbEST
Sequence 1987	AA418628	dbEST	Sequence 2039	AA468575	dbEST
Sequence 1988	AA418685	dbEST	Sequence 2040	AA468839	dbEST
Sequence 1989	AA418824	dbEST	Sequence 2041	AA469199	dbEST
Sequence 1990	AA419011	dbEST	Sequence 2042	AA469406	dbEST
Sequence 1991	AA420625	dbEST	Sequence 2043	AA476263	dbEST
Sequence 1992	AA420645	dbEST	Sequence 2044	AA477173	dbEST
Sequence 1993	AA420721	dbEST	Sequence 2045	AA477698	dbEST
Sequence 1994	AA420826	dbEST	Sequence 2046	AA479614	dbEST
Sequence 1995	AA423957	dbEST	Sequence 2047	AA480420	dbEST
Sequence 1996	AA424109	dbEST	Sequence 2048	AA480505	dbEST
Sequence 1997	AA424202	dbEST	Sequence 2049	AA481355	dbEST
Sequence 1998	AA424466	dbEST	Sequence 2050	AA482853	dbEST
Sequence 1999	AA424543	dbEST	Sequence 2051	AA483565	dbEST
Sequence 2000	AA424648	dbEST	Sequence 2052	AA485467	dbEST
Sequence 2001	AA426209	dbEST	Sequence 2053	AA485767	dbEST
Sequence 2002	AA427895	dbEST	Sequence 2054	AA487503	dbEST
Sequence 2003	AA428143	dbEST	Sequence 2055	AA488280	dbEST
Sequence 2004	AA429173	dbEST	Sequence 2056	AA489032	dbEST
Sequence 2005	AA429190	dbEST	Sequence 2057	AA489410	dbEST
Sequence 2006	AA429336	dbEST	Sequence 2058	AA489921	dbEST
Sequence 2007	AA429381	dbEST	Sequence 2059	AA491081	dbEST
Sequence 2008	AA430304	dbEST	Sequence 2060	AA491866	dbEST
Sequence 2009	AA432203	dbEST	Sequence 2061	AA492026	dbEST
Sequence 2010	AA434502	dbEST	Sequence 2062	AA492143	dbEST
Sequence 2011	AA436395	dbEST	Sequence 2063	AA492280	dbEST
Sequence 2012	AA436730	dbEST	Sequence 2064	AA493512	dbEST
Sequence 2013	AA437224	dbEST	Sequence 2065	AA493742	dbEST
Sequence 2014	AA442145	dbEST	Sequence 2066	AA493962	dbEST
Sequence 2015	AA442287	dbEST	Sequence 2067	AA494344	dbEST
Sequence 2016	AA442415	dbEST	Sequence 2068	AA501752	dbEST
Sequence 2017	AA447069	dbEST	Sequence 2069	AA501945	dbEST
Sequence 2018	AA447254	dbEST	Sequence 2070	AA502320	dbEST
Sequence 2019	AA447322	dbEST	Sequence 2071	AA502979	dbEST
Sequence 2020	AA447343	dbEST	Sequence 2072	AA503115	dbEST
Sequence 2021	AA448036	dbEST	Sequence 2073	AA503224	dbEST
Sequence 2022	AA448195	dbEST	Sequence 2074	AA503330	dbEST
Sequence 2023	AA448614	dbEST	Sequence 2075	AA503611	dbEST
Sequence 2024	AA449345	dbEST	Sequence 2076	AA504134	dbEST
Sequence 2025	AA449889	dbEST	Sequence 2077	AA504265	dbEST

# Table 3-1

Sequence 2078	AA504843	dbEST	Sequence 2130	AA564119	dbEST
Sequence 2079	AA505124	dbEST	Sequence 2131	AA565420	dbEST
Sequence 2080	AA505625	dbEST	Sequence 2132	AA568138	dbEST
Sequence 2081	AA506099	dbEST	Sequence 2133	AA568990	dbEST
Sequence 2082	AA507505	dbEST	Sequence 2134	AA569765	dbEST
Sequence 2083	AA508804	dbEST	Sequence 2135	AA570519	dbEST
Sequence 2084	AA513597	dbEST	Sequence 2136	AA570665	dbEST
Sequence 2085	AA513940	dbEST	Sequence 2137	AA573975	dbEST
Sequence 2086	AA514490	dbEST	Sequence 2138	AA574223	dbEST
Sequence 2087	AA514775	dbEST	Sequence 2139	AA574397	dbEST
Sequence 2088	AA514991	dbEST	Sequence 2140	AA575933	dbEST
Sequence 2089	AA516531	dbEST	Sequence 2141	AA575935	dbEST
Sequence 2090	AA521142	dbEST	Sequence 2142	AA577800	dbEST
Sequence 2091	AA522849	dbEST	Sequence 2143	AA578577	dbEST
Sequence 2092	AA522850	dbEST	Sequence 2144	AA578773	dbEST
Sequence 2093	AA523252	dbEST	Sequence 2145	AA578904	dbEST
Sequence 2094	AA523498	dbEST	Sequence 2146	AA579617	dbEST
Sequence 2095	AA523751	dbEST	Sequence 2147	AA580279	dbEST
Sequence 2096	AA524064	dbEST	Sequence 2148	AA580399	dbEST
Sequence 2097	AA524258	dbEST	Sequence 2149	AA583449	dbEST
Sequence 2098	AA524285	dbEST	Sequence 2150	AA585110	dbEST
Sequence 2099	AA525269	dbEST	Sequence 2151	AA587468	dbEST
Sequence 2100	AA526403	dbEST	Sequence 2152	AA588848	dbEST
Sequence 2101	AA526430	dbEST	Sequence 2153	AA592908	dbEST
Sequence 2102	AA526834	dbEST	Sequence 2154	AA593385	dbEST
Sequence 2103	AA526869	dbEST	Sequence 2155	AA599669	dbEST
Sequence 2104	AA527342	dbEST	Sequence 2156	AA602961	dbEST
Sequence 2105	AA527730	dbEST	Sequence 2157	AA604619	dbEST
Sequence 2106	AA527805	dbEST	Sequence 2158	AA609394	dbEST
Sequence 2107	AA531068	dbEST	Sequence 2159	AA609641	dbEST
Sequence 2108	AA531487	dbEST	Sequence 2160	AA610581	dbEST
Sequence 2109	AA531563	dbEST	Sequence 2161	AA612573	dbEST
Sequence 2110	AA532398	dbEST	Sequence 2162	AA612864	dbEST
Sequence 2111	AA532934	dbEST	Sequence 2163	AA613891	dbEST
Sequence 2112	AA533575	dbEST	Sequence 2164	AA614350	dbEST
Sequence 2113	AA533963	dbEST	Sequence 2165	AA620396	dbEST
Sequence 2114	AA534171	dbEST	Sequence 2166	AA620750	dbEST
Sequence 2115	AA534173	dbEST	Sequence 2167	AA622765	dbEST
Sequence 2116	AA534298	dbEST	Sequence 2168	AA627855	dbEST
Sequence 2117	AA534395	dbEST	Sequence 2169	AA630303	dbEST
Sequence 2118	AA536129	dbEST	Sequence 2170	AA631303	dbEST
Sequence 2119	AA541515	dbEST	Sequence 2171	AA631419	dbEST
Sequence 2120	AA541677	dbEST	Sequence 2172	AA631460	dbEST
Sequence 2121	AA553726	dbEST	Sequence 2173	AA631868	dbEST
Sequence 2122	AA553826	dbEST	Sequence 2174	AA634772	dbEST
Sequence 2123	AA554326	dbEST	Sequence 2175	AA635024	dbEST
Sequence 2124	AA557174	dbEST	Sequence 2176	AA639902	dbEST
Sequence 2125	AA557683	dbEST	Sequence 2177	AA640038	dbEST
Sequence 2126	AA558280	dbEST	Sequence 2178	AA640474	dbEST
Sequence 2127	AA558547	dbEST	Sequence 2179	AA641195	dbEST
Sequence 2128	AA558755	dbEST	Sequence 2180	AA644237	dbEST
Sequence 2129	AA559055	dbEST	Sequence 2181	AA648318	dbEST

# Table 3-1

Sequence 2182	AA648597	dbEST	Sequence 2224	AA776740	dbEST
Sequence 2183	AA649012	dbEST	Sequence 2235	AA779728	dbEST
Sequence 2184	AA650114	dbEST	Sequence 2236	AA788779	dbEST
Sequence 2185	AA652167	dbEST	Sequence 2237	AA788875	dbEST
Sequence 2186	AA652478	dbEST	Sequence 2238	AA804544	dbEST
Sequence 2187	AA653601	dbEST	Sequence 2239	AA805228	dbEST
Sequence 2188	AA654875	dbEST	Sequence 2240	AA808492	dbEST
Sequence 2189	AA657411	dbEST	Sequence 2241	AA815305	dbEST
Sequence 2190	AA657488	dbEST	Sequence 2242	AA824401	dbEST
Sequence 2191	AA659388	dbEST	Sequence 2243	AA825768	dbEST
Sequence 2192	AA659719	dbEST	Sequence 2244	AA825940	dbEST
Sequence 2193	AA664480	dbEST	Sequence 2245	AA827875	dbEST
Sequence 2194	AA665209	dbEST	Sequence 2246	AA827878	dbEST
Sequence 2195	AA677531	dbEST	Sequence 2247	AA829236	dbEST
Sequence 2196	AA679791	dbEST	Sequence 2248	AA829547	dbEST
Sequence 2197	AA679935	dbEST	Sequence 2249	AA834540	dbEST
Sequence 2198	AA682244	dbEST	Sequence 2250	AA838003	dbEST
Sequence 2199	AA682252	dbEST	Sequence 2251	AA838410	dbEST
Sequence 2200	AA682283	dbEST	Sequence 2252	AA838681	dbEST
Sequence 2201	AA687216	dbEST	Sequence 2253	AA843326	dbEST
Sequence 2202	AA687336	dbEST	Sequence 2254	AA843592	dbEST
Sequence 2203	AA700232	dbEST	Sequence 2255	AA843706	dbEST
Sequence 2204	AA700876	dbEST	Sequence 2256	AA844070	dbEST
Sequence 2205	AA702888	dbEST	Sequence 2257	AA847656	dbEST
Sequence 2206	AA703396	dbEST	Sequence 2258	AA848129	dbEST
Sequence 2207	AA705433	dbEST	Sequence 2259	AA853183	dbEST
Sequence 2208	AA706764	dbEST	Sequence 2260	AA856719	dbEST
Sequence 2209	AA707607	dbEST	Sequence 2261	AA857476	dbEST
Sequence 2210	AA720578	dbEST	Sequence 2262	AA857936	dbEST
Sequence 2211	AA721375	dbEST	Sequence 2263	AA872606	dbEST
Sequence 2212	AA723525	dbEST	Sequence 2264	AA873182	dbEST
Sequence 2213	AA725400	dbEST	Sequence 2265	AA876668	dbEST
Sequence 2214	AA730534	dbEST	Sequence 2266	AA876897	dbEST
Sequence 2215	AA730780	dbEST	Sequence 2267	AA877789	dbEST
Sequence 2216	AA731556	dbEST	Sequence 2268	AA878212	dbEST
Sequence 2217	AA731700	dbEST	Sequence 2269	AA883580	dbEST
Sequence 2218	AA741297	dbEST	Sequence 2270	AA883901	dbEST
Sequence 2219	AA743975	dbEST	Sequence 2271	AA884098	dbEST
Sequence 2220	AA745694	dbEST	Sequence 2272	AA886818	dbEST
Sequence 2221	AA749045	dbEST	Sequence 2273	AA888589	dbEST
Sequence 2222	AA758348	dbEST	Sequence 2274	AA888665	dbEST
Sequence 2223	AA760738	dbEST	Sequence 2275	AA902388	dbEST
Sequence 2224	AA760894	dbEST	Sequence 2276	AA907575	dbEST
Sequence 2225	AA767154	dbEST	Sequence 2277	AA912796	dbEST
Sequence 2226	AA767457	dbEST	Sequence 2278	AA916635	dbEST
Sequence 2227	AA767764	dbEST	Sequence 2279	AA916753	dbEST
Sequence 2228	AA768348	dbEST	Sequence 2280	AA918023	dbEST
Sequence 2229	AA769434	dbEST	Sequence 2281	AA922237	dbEST
Sequence 2230	AA769696	dbEST	Sequence 2282	AA923278	dbEST
Sequence 2231	AA769722	dbEST	Sequence 2283	AA926992	dbEST
Sequence 2232	AA774869	dbEST	Sequence 2284	AA932252	dbEST
Sequence 2233	AA775918	dbEST	Sequence 2285	AA934368	dbEST

# Table 3-1

Sequence 2286	AA934763	dbEST	Sequence 2338	AI087145	dbEST
Sequence 2287	AA935526	dbEST	Sequence 2339	AI087888	dbEST
Sequence 2288	AA935811	dbEST	Sequence 2340	AI088778	dbEST
Sequence 2289	AA939199	dbEST	Sequence 2341	AI090809	dbEST
Sequence 2290	AA939266	dbEST	Sequence 2342	AI092479	dbEST
Sequence 2291	AA948320	dbEST	Sequence 2343	AI094741	dbEST
Sequence 2292	AA954674	dbEST	Sequence 2344	AI097410	dbEST
Sequence 2293	AA962300	dbEST	Sequence 2345	AI114602	dbEST
Sequence 2294	AA968621	dbEST	Sequence 2346	AI114651	dbEST
Sequence 2295	AA968756	dbEST	Sequence 2347	AI126233	dbEST
Sequence 2296	AA969459	dbEST	Sequence 2348	AI126867	dbEST
Sequence 2297	AA969512	dbEST	Sequence 2349	AI128828	dbEST
Sequence 2298	AA973560	dbEST	Sequence 2350	AI130796	dbEST
Sequence 2299	AA977197	dbEST	Sequence 2351	AI133466	dbEST
Sequence 2300	AA977226	dbEST	Sequence 2352	AI133690	dbEST
Sequence 2301	AA978214	dbEST	Sequence 2353	AI138633	dbEST
Sequence 2302	AA983560	dbEST	Sequence 2354	AI138640	dbEST
Sequence 2303	AA987290	dbEST	Sequence 2355	AI140096	dbEST
Sequence 2304	AA991398	dbEST	Sequence 2356	AI141770	dbEST
Sequence 2305	AA995066	dbEST	Sequence 2357	AI142083	dbEST
Sequence 2306	AA995747	dbEST	Sequence 2358	AI143775	dbEST
Sequence 2307	AA996010	dbEST	Sequence 2359	AI149592	dbEST
Sequence 2308	AF034176	dbEST	Sequence 2360	AI151140	dbEST
Sequence 2309	AF063521	dbEST	Sequence 2361	AI161068	dbEST
Sequence 2310	AI015790	dbEST	Sequence 2362	AI174957	dbEST
Sequence 2311	AI018625	dbEST	Sequence 2363	AI174991	dbEST
Sequence 2312	AI022687	dbEST	Sequence 2364	AI183358	dbEST
Sequence 2313	AI024549	dbEST	Sequence 2365	AI183447	dbEST
Sequence 2314	AI025419	dbEST	Sequence 2366	AI184562	dbEST
Sequence 2315	AI026767	dbEST	Sequence 2367	AI191244	dbEST
Sequence 2316	AI027536	dbEST	Sequence 2368	AI192767	dbEST
Sequence 2317	AI032392	dbEST	Sequence 2369	AI198311	dbEST
Sequence 2318	AI032838	dbEST	Sequence 2370	AI198986	dbEST
Sequence 2319	AI038692	dbEST	Sequence 2371	AI199094	dbEST
Sequence 2320	AI040598	dbEST	Sequence 2372	AI200038	dbEST
Sequence 2321	AI050871	dbEST	Sequence 2373	AI200110	dbEST
Sequence 2322	AI051210	dbEST	Sequence 2374	AI204090	dbEST
Sequence 2323	AI052333	dbEST	Sequence 2375	AI206199	dbEST
Sequence 2324	AI055939	dbEST	Sequence 2376	AI206344	dbEST
Sequence 2325	AI061649	dbEST	Sequence 2377	AI207367	dbEST
Sequence 2326	AI064691	dbEST	Sequence 2378	AI208947	dbEST
Sequence 2327	AI064844	dbEST	Sequence 2379	AI215841	dbEST
Sequence 2328	AI065092	dbEST	Sequence 2380	AI216969	dbEST
Sequence 2329	AI073465	dbEST	Sequence 2381	AI216988	dbEST
Sequence 2330	AI075324	dbEST	Sequence 2382	AI217003	dbEST
Sequence 2331	AI079558	dbEST	Sequence 2383	AI217012	dbEST
Sequence 2332	AI080267	dbEST	Sequence 2384	AI217021	dbEST
Sequence 2333	AI080480	dbEST	Sequence 2385	AI217023	dbEST
Sequence 2334	AI082168	dbEST	Sequence 2386	AI217425	dbEST
Sequence 2335	AI083814	dbEST	Sequence 2387	AI218376	dbEST
Sequence 2336	AI084604	dbEST	Sequence 2388	AI218882	dbEST
Sequence 2337	AI085165	dbEST	Sequence 2389	AI219324	dbEST



# Table 3-1

Sequence 2390	AI2218	dbEST	Sequence 2442	AI347506	dbEST
Sequence 2391	AI223085	dbEST	Sequence 2443	AI356718	dbEST
Sequence 2392	AI224519	dbEST	Sequence 2444	AI362403	dbEST
Sequence 2393	AI225043	dbEST	Sequence 2445	AI362462	dbEST
Sequence 2394	AI239822	dbEST	Sequence 2446	AI364053	dbEST
Sequence 2395	AI240872	dbEST	Sequence 2447	AI367350	dbEST
Sequence 2396	AI243423	dbEST	Sequence 2448	AI369174	dbEST
Sequence 2397	AI243780	dbEST	Sequence 2449	AI376513	dbEST
Sequence 2398	AI248277	dbEST	Sequence 2450	AI376865	dbEST
Sequence 2399	AI248736	dbEST	Sequence 2451	AI377194	dbEST
Sequence 2400	AI249000	dbEST	Sequence 2452	AI391631	dbEST
Sequence 2401	AI249797	dbEST	Sequence 2453	AI394646	dbEST
Sequence 2402	AI253330	dbEST	Sequence 2454	AI400752	dbEST
Sequence 2403	AI253335	dbEST	Sequence 2455	AI401840	dbEST
Sequence 2404	AI253338	dbEST	Sequence 2456	AI420227	dbEST
Sequence 2405	AI253379	dbEST	Sequence 2457	AI431814	dbEST
Sequence 2406	AI253436	dbEST	Sequence 2458	AI433818	dbEST
Sequence 2407	AI262486	dbEST	Sequence 2459	AI439774	dbEST
Sequence 2408	AI265776	dbEST	Sequence 2460	AI452703	dbEST
Sequence 2409	AI267162	dbEST	Sequence 2461	AI469038	dbEST
Sequence 2410	AI267185	dbEST	Sequence 2462	AI472525	dbEST
Sequence 2411	AI267276	dbEST	Sequence 2463	AI474466	dbEST
Sequence 2412	AI267282	dbEST	Sequence 2464	AI476318	dbEST
Sequence 2413	AI267307	dbEST	Sequence 2465	AI478365	dbEST
Sequence 2414	AI267454	dbEST	Sequence 2466	AI479439	dbEST
Sequence 2415	AI267502	dbEST	Sequence 2467	AI494299	dbEST
Sequence 2416	AI268328	dbEST	Sequence 2468	AI499393	dbEST
Sequence 2417	AI268405	dbEST	Sequence 2469	AI499986	dbEST
Sequence 2418	AI268860	dbEST	Sequence 2470	AI521100	dbEST
Sequence 2419	AI269060	dbEST	Sequence 2471	AI523506	dbEST
Sequence 2420	AI270511	dbEST	Sequence 2472	AI525231	dbEST
Sequence 2421	AI272941	dbEST	Sequence 2473	AI525454	dbEST
Sequence 2422	AI275175	dbEST	Sequence 2474	AI536024	dbEST
Sequence 2423	AI279838	dbEST	Sequence 2475	AI539349	dbEST
Sequence 2424	AI282277	dbEST	Sequence 2476	AI547146	dbEST
Sequence 2425	AI285488	dbEST	Sequence 2477	AI554016	dbEST
Sequence 2426	AI289220	dbEST	Sequence 2478	AI557112	dbEST
Sequence 2427	AI291247	dbEST	Sequence 2479	AI557116	dbEST
Sequence 2428	AI299524	dbEST	Sequence 2480	AI557182	dbEST
Sequence 2429	AI302137	dbEST	Sequence 2481	AI557225	dbEST
Sequence 2430	AI302799	dbEST	Sequence 2482	AI557231	dbEST
Sequence 2431	AI304947	dbEST	Sequence 2483	AI557235	dbEST
Sequence 2432	AI307402	dbEST	Sequence 2484	AI557246	dbEST
Sequence 2433	AI307515	dbEST	Sequence 2485	AI557495	dbEST
Sequence 2434	AI318280	dbEST	Sequence 2486	AI557599	dbEST
Sequence 2435	AI334833	dbEST	Sequence 2487	AI557626	dbEST
Sequence 2436	AI334964	dbEST	Sequence 2488	AI560958	dbEST
Sequence 2437	AI335153	dbEST	Sequence 2489	AI561122	dbEST
Sequence 2438	AI335554	dbEST	Sequence 2490	AI564475	dbEST
Sequence 2439	AI336147	dbEST	Sequence 2491	AI564487	dbEST
Sequence 2440	AI338335	dbEST	Sequence 2492	AI580160	dbEST
Sequence 2441	AI345416	dbEST	Sequence 2493	AI580162	dbEST

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Sequence 2494	AI580357	dbEST	Sequence 2546	AI768854	dbEST
Sequence 2495	AI589476	dbEST	Sequence 2547	AI768877	dbEST
Sequence 2496	AI591088	dbEST	Sequence 2548	AI770098	dbEST
Sequence 2497	AI620673	dbEST	Sequence 2549	AI791179	dbEST
Sequence 2498	AI621153	dbEST	Sequence 2550	AI791419	dbEST
Sequence 2499	AI623315	dbEST	Sequence 2551	AI796120	dbEST
Sequence 2500	AI623804	dbEST	Sequence 2552	AI797042	dbEST
Sequence 2501	AI625404	dbEST	Sequence 2553	AI800250	dbEST
Sequence 2502	AI625747	dbEST	Sequence 2554	AI800673	dbEST
Sequence 2503	AI627356	dbEST	Sequence 2555	AI804662	dbEST
Sequence 2504	AI627542	dbEST	Sequence 2556	AI805522	dbEST
Sequence 2505	AI630104	dbEST	Sequence 2557	AI809314	dbEST
Sequence 2506	AI630188	dbEST	Sequence 2558	AI810002	dbEST
Sequence 2507	AI630634	dbEST	Sequence 2559	AI815499	dbEST
Sequence 2508	AI632523	dbEST	Sequence 2560	AI816322	dbEST
Sequence 2509	AI632534	dbEST	Sequence 2561	AI821437	dbEST
Sequence 2510	AI636943	dbEST	Sequence 2562	AI826105	dbEST
Sequence 2511	AI638414	dbEST	Sequence 2563	AI830758	dbEST
Sequence 2512	AI650721	dbEST	Sequence 2564	AI831462	dbEST
Sequence 2513	AI651195	dbEST	Sequence 2565	AI863042	dbEST
Sequence 2514	AI653319	dbEST	Sequence 2566	AI864870	dbEST
Sequence 2515	AI653621	dbEST	Sequence 2567	AI867463	dbEST
Sequence 2516	AI659898	dbEST	Sequence 2568	AI873501	dbEST
Sequence 2517	AI669210	dbEST	Sequence 2569	AI878926	dbEST
Sequence 2518	AI670009	dbEST	Sequence 2570	AI879040	dbEST
Sequence 2519	AI680343	dbEST	Sequence 2571	AI879248	dbEST
Sequence 2520	AI683431	dbEST	Sequence 2572	AI884963	dbEST
Sequence 2521	AI688098	dbEST	Sequence 2573	AI887875	dbEST
Sequence 2522	AI689722	dbEST	Sequence 2574	AI914133	dbEST
Sequence 2523	AI689762	dbEST	Sequence 2575	AI923011	dbEST
Sequence 2524	AI690157	dbEST	Sequence 2576	AI923978	dbEST
Sequence 2525	AI693561	dbEST	Sequence 2577	AI929113	dbEST
Sequence 2526	AI700642	dbEST	Sequence 2578	AI936548	dbEST
Sequence 2527	AI709356	dbEST	Sequence 2579	AI936562	dbEST
Sequence 2528	AI732680	dbEST	Sequence 2580	AI948503	dbEST
Sequence 2529	AI734209	dbEST	Sequence 2581	AI949422	dbEST
Sequence 2530	AI738605	dbEST	Sequence 2582	AI951118	dbEST
Sequence 2531	AI740900	dbEST	Sequence 2583	AI951970	dbEST
Sequence 2532	AI741486	dbEST	Sequence 2584	AI953711	dbEST
Sequence 2533	AI741633	dbEST	Sequence 2585	AI969567	dbEST
Sequence 2534	AI742115	dbEST	Sequence 2586	AI972279	dbEST
Sequence 2535	AI743303	dbEST	Sequence 2587	AI972479	dbEST
Sequence 2536	AI743852	dbEST	Sequence 2588	AI979288	dbEST
Sequence 2537	AI750682	dbEST	Sequence 2589	AI986240	dbEST
Sequence 2538	AI753280	dbEST	Sequence 2590	AL036499	dbEST
Sequence 2539	AI753951	dbEST	Sequence 2591	AL037031	dbEST
Sequence 2540	AI755085	dbEST	Sequence 2592	AL037226	dbEST
Sequence 2541	AI761291	dbEST	Sequence 2593	AL037707	dbEST
Sequence 2542	AI761469	dbEST	Sequence 2594	AL037798	dbEST
Sequence 2543	AI761986	dbEST	Sequence 2595	AL037828	dbEST
Sequence 2544	AI764962	dbEST	Sequence 2596	AL037847	dbEST
Sequence 2545	AI768624	dbEST	Sequence 2597	AL038802	dbEST

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Sequence 2598	AL038985	dbEST	Sequence 2650	C18232	dbEST
Sequence 2599	AL039254	dbEST	Sequence 2651	D50977	dbEST
Sequence 2600	AL039293	dbEST	Sequence 2652	D54335	dbEST
Sequence 2601	AL039542	dbEST	Sequence 2653	D58694	dbEST
Sequence 2602	AL040692	dbEST	Sequence 2654	D60970	dbEST
Sequence 2603	AL041050	dbEST	Sequence 2655	D81855	dbEST
Sequence 2604	AL041176	dbEST	Sequence 2656	F02595	dbEST
Sequence 2605	AL042234	dbEST	Sequence 2657	F08493	dbEST
Sequence 2606	AL042613	dbEST	Sequence 2658	F27229	dbEST
Sequence 2607	AL043034	dbEST	Sequence 2659	H03650	dbEST
Sequence 2608	AL043506	dbEST	Sequence 2660	H03785	dbEST
Sequence 2609	AL043864	dbEST	Sequence 2661	H06621	dbEST
Sequence 2610	AL044891	dbEST	Sequence 2662	H06944	dbEST
Sequence 2611	AL045213	dbEST	Sequence 2663	H09332	dbEST
Sequence 2612	AL045331	dbEST	Sequence 2664	H12519	dbEST
Sequence 2613	AL045538	dbEST	Sequence 2665	H24176	dbEST
Sequence 2614	AL048890	dbEST	Sequence 2666	H24856	dbEST
Sequence 2615	AL118999	dbEST	Sequence 2667	H26492	dbEST
Sequence 2616	AL120381	dbEST	Sequence 2668	H40738	dbEST
Sequence 2617	AW002185	dbEST	Sequence 2669	H47252	dbEST
Sequence 2618	AW003247	dbEST	Sequence 2670	H47363	dbEST
Sequence 2619	AW008473	dbEST	Sequence 2671	H49329	dbEST
Sequence 2620	AW015055	dbEST	Sequence 2672	H49828	dbEST
Sequence 2621	AW020699	dbEST	Sequence 2673	H57382	dbEST
Sequence 2622	AW022599	dbEST	Sequence 2674	H57485	dbEST
Sequence 2623	AW027339	dbEST	Sequence 2675	H60344	dbEST
Sequence 2624	AW028594	dbEST	Sequence 2676	H73387	dbEST
Sequence 2625	AW028606	dbEST	Sequence 2677	H82380	dbEST
Sequence 2626	AW044547	dbEST	Sequence 2678	H87420	dbEST
Sequence 2627	AW067913	dbEST	Sequence 2679	H93552	dbEST
Sequence 2628	AW071696	dbEST	Sequence 2680	H94179	dbEST
Sequence 2629	AW076087	dbEST	Sequence 2681	H95161	dbEST
Sequence 2630	AW078747	dbEST	Sequence 2682	N27899	dbEST
Sequence 2631	AW084017	dbEST	Sequence 2683	N32072	dbEST
Sequence 2632	AW102951	dbEST	Sequence 2684	N34186	dbEST
Sequence 2633	AW104561	dbEST	Sequence 2685	N44337	dbEST
Sequence 2634	AW118457	dbEST	Sequence 2686	N45167	dbEST
Sequence 2635	AW118595	dbEST	Sequence 2687	N46947	dbEST
Sequence 2636	AW131770	dbEST	Sequence 2688	N52271	dbEST
Sequence 2637	AW134772	dbEST	Sequence 2689	N52432	dbEST
Sequence 2638	AW135359	dbEST	Sequence 2690	N53033	dbEST
Sequence 2639	AW138731	dbEST	Sequence 2691	N54973	dbEST
Sequence 2640	AW140056	dbEST	Sequence 2692	N64576	dbEST
Sequence 2641	AW148884	dbEST	Sequence 2693	N72648	dbEST
Sequence 2642	AW150276	dbEST	Sequence 2694	N72922	dbEST
Sequence 2643	AW152311	dbEST	Sequence 2695	N74267	dbEST
Sequence 2644	AW157060	dbEST	Sequence 2696	N76672	dbEST
Sequence 2645	AW157303	dbEST	Sequence 2697	N79427	dbEST
Sequence 2646	AW160447	dbEST	Sequence 2698	N92160	dbEST
Sequence 2647	AW167579	dbEST	Sequence 2699	N94098	dbEST
Sequence 2648	AW176926	dbEST	Sequence 2700	R10438	dbEST
Sequence 2649	C15322	dbEST	Sequence 2701	R10553	dbEST

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Sequence 2702	R13850	dbEST	Sequence 2754	Z45274	dbEST
Sequence 2703	R24803	dbEST	Sequence 2755	Q44278	NUCPATENT
Sequence 2704	R28584	dbEST	Sequence 2756	Q46540	NUCPATENT
Sequence 2705	R34443	dbEST	Sequence 2757	Q49943	NUCPATENT
Sequence 2706	R35797	dbEST	Sequence 2758	Q53478	NUCPATENT
Sequence 2707	R45144	dbEST	Sequence 2759	T18813	NUCPATENT
Sequence 2708	R48890	dbEST	Sequence 2760	T28638	NUCPATENT
Sequence 2709	R70639	dbEST	Sequence 2761	T43474	NUCPATENT
Sequence 2710	R76235	dbEST	Sequence 2762	T59274	NUCPATENT
Sequence 2711	R76244	dbEST	Sequence 2763	V26460	NUCPATENT
Sequence 2712	R77186	dbEST	Sequence 2764	V41451	NUCPATENT
Sequence 2713	R80279	dbEST	Sequence 2765	V47539	NUCPATENT
Sequence 2714	R80852	dbEST	Sequence 2766	V49578	NUCPATENT
Sequence 2715	R84308	dbEST	Sequence 2767	V58523	NUCPATENT
Sequence 2716	R86265	dbEST	Sequence 2768	V58544	NUCPATENT
Sequence 2717	R87877	dbEST	Sequence 2769	V58628	NUCPATENT
Sequence 2718	R89611	dbEST	Sequence 2770	V58685	NUCPATENT
Sequence 2719	R92548	dbEST	Sequence 2771	V58761	NUCPATENT
Sequence 2720	R95821	dbEST	Sequence 2772	V59638	NUCPATENT
Sequence 2721	T10145	dbEST	Sequence 2773	V61487	NUCPATENT
Sequence 2722	T18977	dbEST	Sequence 2774	V62427	NUCPATENT
Sequence 2723	T32212	dbEST	Sequence 2775	V62428	NUCPATENT
Sequence 2724	T41232	dbEST	Sequence 2776	V62430	NUCPATENT
Sequence 2725	T52823	dbEST	Sequence 2777	V68992	NUCPATENT
Sequence 2726	T53424	dbEST	Sequence 2778	V84497	NUCPATENT
Sequence 2727	T54095	dbEST	Sequence 2779	V84510	NUCPATENT
Sequence 2728	T57386	dbEST	Sequence 2780	V87984	NUCPATENT
Sequence 2729	T64630	dbEST	Sequence 2781	V90138	NUCPATENT
Sequence 2730	T65098	dbEST	Sequence 2782	X00630	NUCPATENT
Sequence 2731	T67265	dbEST	Sequence 2783	X00632	NUCPATENT
Sequence 2732	T78615	dbEST	Sequence 2784	X03841	NUCPATENT
Sequence 2733	T83709	dbEST	Sequence 2785	X04407	NUCPATENT
Sequence 2734	T93613	dbEST	Sequence 2786	X25445	NUCPATENT
Sequence 2735	T99715	dbEST	Sequence 2787	X26850	NUCPATENT
Sequence 2736	U46309	dbEST	Sequence 2788	X27262	NUCPATENT
Sequence 2737	W04421	dbEST	Sequence 2789	X27278	NUCPATENT
Sequence 2738	W19519	dbEST	Sequence 2790	X37486	NUCPATENT
Sequence 2739	W25008	dbEST	Sequence 2791	X40477	NUCPATENT
Sequence 2740	W31992	dbEST	Sequence 2792	X40518	NUCPATENT
Sequence 2741	W39298	dbEST	Sequence 2793	X40711	NUCPATENT
Sequence 2742	W42653	dbEST	Sequence 2794	X41185	NUCPATENT
Sequence 2743	W52896	dbEST	Sequence 2795	X90444	NUCPATENT
Sequence 2744	W56077	dbEST	Sequence 2796	X97772	NUCPATENT
Sequence 2745	W63676	dbEST	Sequence 2797	X98891	NUCPATENT
Sequence 2746	W68028	dbEST	Sequence 2798	Z11491	NUCPATENT
Sequence 2747	W86160	dbEST	Sequence 2799	Z14468	NUCPATENT
Sequence 2748	W87865	dbEST	Sequence 2800	Z15132	NUCPATENT
Sequence 2749	W88823	dbEST	Sequence 2801	Z16412	NUCPATENT
Sequence 2750	W90224	dbEST	Sequence 2802	AC28312	PREPATNUC
Sequence 2751	W91890	dbEST	Sequence 2803	AC31081	PREPATNUC
Sequence 2752	Z43146	dbEST	Sequence 2804	AC31093	PREPATNUC
Sequence 2753	Z43843	dbEST	Sequence 2805	AC33927	PREPATNUC

**Table 3-1**

<b>Sequence #</b>	<b>Accession #</b>	<b>Database</b>	<b>Sequence #</b>	<b>Accession #</b>	<b>Database</b>
Sequence 2806	A06846	GENBANK	Sequence 2857	AB019524	GENBANK
Sequence 2807	A17546	GENBANK	Sequence 2858	AB019564	GENBANK
Sequence 2808	A18657	GENBANK	Sequence 2859	AB019568	GENBANK
Sequence 2809	AB000095	GENBANK	Sequence 2860	AB019987	GENBANK
Sequence 2810	AB000468	GENBANK	Sequence 2861	AB020650	GENBANK
Sequence 2811	AB002303	GENBANK	Sequence 2862	AB020673	GENBANK
Sequence 2812	AB002311	GENBANK	Sequence 2863	AB020682	GENBANK
Sequence 2813	AB002319	GENBANK	Sequence 2864	AB020686	GENBANK
Sequence 2814	AB002330	GENBANK	Sequence 2865	AB020880	GENBANK
Sequence 2815	AB002331	GENBANK	Sequence 2866	AB021663	GENBANK
Sequence 2816	AB002365	GENBANK	Sequence 2867	AB023198	GENBANK
Sequence 2817	AB002366	GENBANK	Sequence 2868	AB023205	GENBANK
Sequence 2818	AB002370	GENBANK	Sequence 2869	AB023215	GENBANK
Sequence 2819	AB002380	GENBANK	Sequence 2870	AB024704	GENBANK
Sequence 2820	AB002386	GENBANK	Sequence 2871	AB027466	GENBANK
Sequence 2821	AB004788	GENBANK	Sequence 2872	AB028624	GENBANK
Sequence 2822	AB004851	GENBANK	Sequence 2873	AB028951	GENBANK
Sequence 2823	AB006625	GENBANK	Sequence 2874	AB028995	GENBANK
Sequence 2824	AB007891	GENBANK	Sequence 2875	AB029008	GENBANK
Sequence 2825	AB007899	GENBANK	Sequence 2876	AB029025	GENBANK
Sequence 2826	AB007916	GENBANK	Sequence 2877	AB029290	GENBANK
Sequence 2827	AB007929	GENBANK	Sequence 2878	AB032969	GENBANK
Sequence 2828	AB007932	GENBANK	Sequence 2879	AB032983	GENBANK
Sequence 2829	AB007935	GENBANK	Sequence 2880	AB032994	GENBANK
Sequence 2830	AB007956	GENBANK	Sequence 2881	AB033007	GENBANK
Sequence 2831	AB007957	GENBANK	Sequence 2882	AB033010	GENBANK
Sequence 2832	AB010427	GENBANK	Sequence 2883	AB033033	GENBANK
Sequence 2833	AB011087	GENBANK	Sequence 2884	AB033059	GENBANK
Sequence 2834	AB011103	GENBANK	Sequence 2885	AB033070	GENBANK
Sequence 2835	AB011108	GENBANK	Sequence 2886	AB033091	GENBANK
Sequence 2836	AB011147	GENBANK	Sequence 2887	AB033899	GENBANK
Sequence 2837	AB011164	GENBANK	Sequence 2888	AF000152	GENBANK
Sequence 2838	AB011169	GENBANK	Sequence 2889	AF000381	GENBANK
Sequence 2839	AB011170	GENBANK	Sequence 2890	AF001893	GENBANK
Sequence 2840	AB013918	GENBANK	Sequence 2891	AF002210	GENBANK
Sequence 2841	AB014511	GENBANK	Sequence 2892	AF002668	GENBANK
Sequence 2842	AB014533	GENBANK	Sequence 2893	AF003341	GENBANK
Sequence 2843	AB014536	GENBANK	Sequence 2894	AF004561	GENBANK
Sequence 2844	AB014542	GENBANK	Sequence 2895	AF004813	GENBANK
Sequence 2845	AB014577	GENBANK	Sequence 2896	AF005038	GENBANK
Sequence 2846	AB014888	GENBANK	Sequence 2897	AF005043	GENBANK
Sequence 2847	AB015907	GENBANK	Sequence 2898	AF005050	GENBANK
Sequence 2848	AB016533	GENBANK	Sequence 2899	AF006086	GENBANK
Sequence 2849	AB017430	GENBANK	Sequence 2900	AF006514	GENBANK
Sequence 2850	AB018274	GENBANK	Sequence 2901	AF007144	GENBANK
Sequence 2851	AB018320	GENBANK	Sequence 2902	AF007151	GENBANK
Sequence 2852	AB018324	GENBANK	Sequence 2903	AF007216	GENBANK
Sequence 2853	AB018330	GENBANK	Sequence 2904	AF009620	GENBANK
Sequence 2854	AB018334	GENBANK	Sequence 2905	AF010233	GENBANK
Sequence 2855	AB018338	GENBANK	Sequence 2906	AF010313	GENBANK
Sequence 2856	AB018353	GENBANK	Sequence 2907	AF011904	GENBANK
			Sequence 2908	AF012072	GENBANK

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Sequence 2909	AF013155	GENBANK	Sequence 2951	AF070561	GENBANK
Sequence 2910	AF013759	GENBANK	Sequence 2962	AF070650	GENBANK
Sequence 2911	AF013970	GENBANK	Sequence 2963	AF070657	GENBANK
Sequence 2912	AF015283	GENBANK	Sequence 2964	AF070665	GENBANK
Sequence 2913	AF020038	GENBANK	Sequence 2965	AF071202	GENBANK
Sequence 2914	AF020202	GENBANK	Sequence 2966	AF072810	GENBANK
Sequence 2915	AF021336	GENBANK	Sequence 2967	AF073310	GENBANK
Sequence 2916	AF021351	GENBANK	Sequence 2968	AF075587	GENBANK
Sequence 2917	AF023676	GENBANK	Sequence 2969	AF076929	GENBANK
Sequence 2918	AF025684	GENBANK	Sequence 2970	AF077030	GENBANK
Sequence 2919	AF026169	GENBANK	Sequence 2971	AF077043	GENBANK
Sequence 2920	AF026247	GENBANK	Sequence 2972	AF077202	GENBANK
Sequence 2921	AF028832	GENBANK	Sequence 2973	AF077599	GENBANK
Sequence 2922	AF029890	GENBANK	Sequence 2974	AF081192	GENBANK
Sequence 2923	AF030234	GENBANK	Sequence 2975	AF081282	GENBANK
Sequence 2924	AF030310	GENBANK	Sequence 2976	AF082868	GENBANK
Sequence 2925	AF033095	GENBANK	Sequence 2977	AF083190	GENBANK
Sequence 2926	AF035268	GENBANK	Sequence 2978	AF083395	GENBANK
Sequence 2927	AF038440	GENBANK	Sequence 2979	AF085359	GENBANK
Sequence 2928	AF038952	GENBANK	Sequence 2980	AF085362	GENBANK
Sequence 2929	AF038963	GENBANK	Sequence 2981	AF085844	GENBANK
Sequence 2930	AF041259	GENBANK	Sequence 2982	AF085893	GENBANK
Sequence 2931	AF042166	GENBANK	Sequence 2983	AF085917	GENBANK
Sequence 2932	AF042385	GENBANK	Sequence 2984	AF086183	GENBANK
Sequence 2933	AF044671	GENBANK	Sequence 2985	AF087481	GENBANK
Sequence 2934	AF044956	GENBANK	Sequence 2986	AF092038	GENBANK
Sequence 2935	AF046785	GENBANK	Sequence 2987	AF092905	GENBANK
Sequence 2936	AF047020	GENBANK	Sequence 2988	AF100741	GENBANK
Sequence 2937	AF047185	GENBANK	Sequence 2989	AF100755	GENBANK
Sequence 2938	AF047599	GENBANK	Sequence 2990	AF102265	GENBANK
Sequence 2939	AF052113	GENBANK	Sequence 2991	AF102988	GENBANK
Sequence 2940	AF052164	GENBANK	Sequence 2992	AF103801	GENBANK
Sequence 2941	AF053070	GENBANK	Sequence 2993	AF103804	GENBANK
Sequence 2942	AF053470	GENBANK	Sequence 2994	AF103907	GENBANK
Sequence 2943	AF054187	GENBANK	Sequence 2995	AF104013	GENBANK
Sequence 2944	AF054838	GENBANK	Sequence 2996	AF110647	GENBANK
Sequence 2945	AF054990	GENBANK	Sequence 2997	AF117949	GENBANK
Sequence 2946	AF055008	GENBANK	Sequence 2998	AF119121	GENBANK
Sequence 2947	AF055022	GENBANK	Sequence 2999	AF126424	GENBANK
Sequence 2948	AF055025	GENBANK	Sequence 3000	AF126782	GENBANK
Sequence 2949	AF055033	GENBANK	Sequence 3001	AF128406	GENBANK
Sequence 2950	AF056087	GENBANK	Sequence 3002	AF131774	GENBANK
Sequence 2951	AF057160	GENBANK	Sequence 3003	AF131856	GENBANK
Sequence 2952	AF058319	GENBANK	Sequence 3004	AF132000	GENBANK
Sequence 2953	AF060152	GENBANK	Sequence 3005	AF132937	GENBANK
Sequence 2954	AF060515	GENBANK	Sequence 3006	AF133845	GENBANK
Sequence 2955	AF061258	GENBANK	Sequence 3007	AF136450	GENBANK
Sequence 2956	AF061938	GENBANK	Sequence 3008	AF139461	GENBANK
Sequence 2957	AF063657	GENBANK	Sequence 3009	AF143235	GENBANK
Sequence 2958	AF064084	GENBANK	Sequence 3010	AF144755	GENBANK
Sequence 2959	AF069765	GENBANK	Sequence 3011	AF145029	GENBANK
Sequence 2960	AF070523	GENBANK	Sequence 3012	AF145316	GENBANK

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Sequence 3013	AF147387	GENBANK	Sequence 3065	AL080209	GENBANK
Sequence 3014	AF150087	GENBANK	Sequence 3066	AL110185	GENBANK
Sequence 3015	AF151103	GENBANK	Sequence 3067	AL110256	GENBANK
Sequence 3016	AF151840	GENBANK	Sequence 3068	AL110297	GENBANK
Sequence 3017	AF151861	GENBANK	Sequence 3069	AL117237	GENBANK
Sequence 3018	AF151870	GENBANK	Sequence 3070	AL117458	GENBANK
Sequence 3019	AF151902	GENBANK	Sequence 3071	AL117526	GENBANK
Sequence 3020	AF155100	GENBANK	Sequence 3072	AL117536	GENBANK
Sequence 3021	AF155113	GENBANK	Sequence 3073	AL117537	GENBANK
Sequence 3022	AF155330	GENBANK	Sequence 3074	AL117619	GENBANK
Sequence 3023	AF155568	GENBANK	Sequence 3075	AL117666	GENBANK
Sequence 3024	AF157028	GENBANK	Sequence 3076	AL133059	GENBANK
Sequence 3025	AF159056	GENBANK	Sequence 3077	AL133080	GENBANK
Sequence 3026	AF165281	GENBANK	Sequence 3078	D13315	GENBANK
Sequence 3027	AF168956	GENBANK	Sequence 3079	D13388	GENBANK
Sequence 3028	AF169481	GENBANK	Sequence 3080	D13641	GENBANK
Sequence 3029	AF174595	GENBANK	Sequence 3081	D13866	GENBANK
Sequence 3030	AF176574	GENBANK	Sequence 3082	D14662	GENBANK
Sequence 3031	AF176702	GENBANK	Sequence 3083	D16111	GENBANK
Sequence 3032	AF179274	GENBANK	Sequence 3084	D16937	GENBANK
Sequence 3033	AF188745	GENBANK	Sequence 3085	D17069	GENBANK
Sequence 3034	AF188746	GENBANK	Sequence 3086	D17260	GENBANK
Sequence 3035	AF190167	GENBANK	Sequence 3087	D17554	GENBANK
Sequence 3036	AF191020	GENBANK	Sequence 3088	D21209	GENBANK
Sequence 3037	AJ000041	GENBANK	Sequence 3089	D21243	GENBANK
Sequence 3038	AJ001189	GENBANK	Sequence 3090	D21260	GENBANK
Sequence 3039	AJ001838	GENBANK	Sequence 3091	D23672	GENBANK
Sequence 3040	AJ002744	GENBANK	Sequence 3092	D25274	GENBANK
Sequence 3041	AJ004913	GENBANK	Sequence 3093	D25328	GENBANK
Sequence 3042	AJ005821	GENBANK	Sequence 3094	D25542	GENBANK
Sequence 3043	AJ005893	GENBANK	Sequence 3095	D26362	GENBANK
Sequence 3044	AJ006470	GENBANK	Sequence 3096	D26485	GENBANK
Sequence 3045	AJ010953	GENBANK	Sequence 3097	D26600	GENBANK
Sequence 3046	AJ011497	GENBANK	Sequence 3098	D28589	GENBANK
Sequence 3047	AJ012499	GENBANK	Sequence 3099	D29012	GENBANK
Sequence 3048	AJ132694	GENBANK	Sequence 3100	D29643	GENBANK
Sequence 3049	AJ242829	GENBANK	Sequence 3101	D31764	GENBANK
Sequence 3050	AJ243874	GENBANK	Sequence 3102	D31886	GENBANK
Sequence 3051	AL049229	GENBANK	Sequence 3103	D38073	GENBANK
Sequence 3052	AL049784	GENBANK	Sequence 3104	D38551	GENBANK
Sequence 3053	AL049934	GENBANK	Sequence 3105	D38583	GENBANK
Sequence 3054	AL050037	GENBANK	Sequence 3106	D42047	GENBANK
Sequence 3055	AL050101	GENBANK	Sequence 3107	D42063	GENBANK
Sequence 3056	AL050136	GENBANK	Sequence 3108	D43950	GENBANK
Sequence 3057	AL050265	GENBANK	Sequence 3109	D45370	GENBANK
Sequence 3058	AL050274	GENBANK	Sequence 3110	D49387	GENBANK
Sequence 3059	AL050282	GENBANK	Sequence 3111	D50371	GENBANK
Sequence 3060	AL050373	GENBANK	Sequence 3112	D50372	GENBANK
Sequence 3061	AL079279	GENBANK	Sequence 3113	D55696	GENBANK
Sequence 3062	AL080135	GENBANK	Sequence 3114	D63475	GENBANK
Sequence 3063	AL080172	GENBANK	Sequence 3115	D63478	GENBANK
Sequence 3064	AL080192	GENBANK	Sequence 3116	D63997	GENBANK

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Sequence 3117	D67029	GENBANK	Sequence 3169	L10284	GENBANK
Sequence 3118	D79991	GENBANK	Sequence 3170	L11566	GENBANK
Sequence 3119	D79994	GENBANK	Sequence 3171	L12387	GENBANK
Sequence 3120	D83032	GENBANK	Sequence 3172	L13434	GENBANK
Sequence 3121	D83703	GENBANK	Sequence 3173	L13852	GENBANK
Sequence 3122	D84476	GENBANK	Sequence 3174	L15203	GENBANK
Sequence 3123	D86972	GENBANK	Sequence 3175	L19597	GENBANK
Sequence 3124	D86984	GENBANK	Sequence 3176	L19713	GENBANK
Sequence 3125	D87292	GENBANK	Sequence 3177	L20010	GENBANK
Sequence 3126	D87328	GENBANK	Sequence 3178	L20859	GENBANK
Sequence 3127	D87437	GENBANK	Sequence 3179	L20941	GENBANK
Sequence 3128	D87438	GENBANK	Sequence 3180	L22009	GENBANK
Sequence 3129	D87452	GENBANK	Sequence 3181	L25081	GENBANK
Sequence 3130	D87455	GENBANK	Sequence 3182	L25085	GENBANK
Sequence 3131	D87666	GENBANK	Sequence 3183	L25610	GENBANK
Sequence 3132	D87667	GENBANK	Sequence 3184	L28010	GENBANK
Sequence 3133	D87735	GENBANK	Sequence 3185	L29008	GENBANK
Sequence 3134	D87953	GENBANK	Sequence 3186	L34087	GENBANK
Sequence 3135	D89289	GENBANK	Sequence 3187	L34839	GENBANK
Sequence 3136	D89675	GENBANK	Sequence 3188	L38951	GENBANK
Sequence 3137	D90228	GENBANK	Sequence 3189	L40403	GENBANK
Sequence 3138	D90427	GENBANK	Sequence 3190	L41143	GENBANK
Sequence 3139	E01500	GENBANK	Sequence 3191	L42542	GENBANK
Sequence 3140	E02135	GENBANK	Sequence 3192	L47345	GENBANK
Sequence 3141	E02628	GENBANK	Sequence 3193	L49399	GENBANK
Sequence 3142	E06721	GENBANK	Sequence 3194	M10036	GENBANK
Sequence 3143	J00200	GENBANK	Sequence 3195	M10119	GENBANK
Sequence 3144	J02871	GENBANK	Sequence 3196	M11233	GENBANK
Sequence 3145	J03007	GENBANK	Sequence 3197	M11353	GENBANK
Sequence 3146	J03040	GENBANK	Sequence 3198	M11560	GENBANK
Sequence 3147	J03464	GENBANK	Sequence 3199	M12938	GENBANK
Sequence 3148	J03473	GENBANK	Sequence 3200	M13520	GENBANK
Sequence 3149	J03544	GENBANK	Sequence 3201	M13692	GENBANK
Sequence 3150	J03592	GENBANK	Sequence 3202	M15395	GENBANK
Sequence 3151	J03779	GENBANK	Sequence 3203	M15796	GENBANK
Sequence 3152	J03799	GENBANK	Sequence 3204	M15885	GENBANK
Sequence 3153	J03827	GENBANK	Sequence 3205	M15990	GENBANK
Sequence 3154	J04177	GENBANK	Sequence 3206	M16247	GENBANK
Sequence 3155	J04443	GENBANK	Sequence 3207	M16553	GENBANK
Sequence 3156	J04478	GENBANK	Sequence 3208	M17254	GENBANK
Sequence 3157	J04615	GENBANK	Sequence 3209	M17885	GENBANK
Sequence 3158	J04759	GENBANK	Sequence 3210	M17886	GENBANK
Sequence 3159	J05176	GENBANK	Sequence 3211	M20260	GENBANK
Sequence 3160	J05192	GENBANK	Sequence 3212	M21895	GENBANK
Sequence 3161	J05211	GENBANK	Sequence 3213	M21896	GENBANK
Sequence 3162	J05633	GENBANK	Sequence 3214	M22918	GENBANK
Sequence 3163	K00409	GENBANK	Sequence 3215	M22920	GENBANK
Sequence 3164	K01911	GENBANK	Sequence 3216	M23613	GENBANK
Sequence 3165	L01042	GENBANK	Sequence 3217	M24194	GENBANK
Sequence 3166	L05092	GENBANK	Sequence 3218	M24594	GENBANK
Sequence 3167	L07033	GENBANK	Sequence 3219	M26663	GENBANK
Sequence 3168	L08044	GENBANK	Sequence 3220	M28016	GENBANK



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Sequence 3221	M282	GENBANK	Sequence 3273	U09367	GENBANK
Sequence 3222	M29366	GENBANK	Sequence 3274	U09410	GENBANK
Sequence 3223	M29536	GENBANK	Sequence 3275	U10248	GENBANK
Sequence 3224	M30448	GENBANK	Sequence 3276	U12465	GENBANK
Sequence 3225	M30818	GENBANK	Sequence 3277	U14603	GENBANK
Sequence 3226	M31899	GENBANK	Sequence 3278	U14968	GENBANK
Sequence 3227	M34840	GENBANK	Sequence 3279	U14969	GENBANK
Sequence 3228	M35252	GENBANK	Sequence 3280	U14970	GENBANK
Sequence 3229	M36072	GENBANK	Sequence 3281	U17077	GENBANK
Sequence 3230	M36647	GENBANK	Sequence 3282	U17104	GENBANK
Sequence 3231	M38690	GENBANK	Sequence 3283	U17105	GENBANK
Sequence 3232	M55409	GENBANK	Sequence 3284	U17838	GENBANK
Sequence 3233	M59849	GENBANK	Sequence 3285	U18197	GENBANK
Sequence 3234	M60457	GENBANK	Sequence 3286	U20770	GENBANK
Sequence 3235	M60828	GENBANK	Sequence 3287	U21090	GENBANK
Sequence 3236	M61831	GENBANK	Sequence 3288	U22897	GENBANK
Sequence 3237	M61866	GENBANK	Sequence 3289	U25766	GENBANK
Sequence 3238	M61916	GENBANK	Sequence 3290	U29091	GENBANK
Sequence 3239	M63573	GENBANK	Sequence 3291	U30897	GENBANK
Sequence 3240	M64098	GENBANK	Sequence 3292	U33760	GENBANK
Sequence 3241	M64241	GENBANK	Sequence 3293	U34038	GENBANK
Sequence 3242	M64572	GENBANK	Sequence 3294	U34994	GENBANK
Sequence 3243	M68840	GENBANK	Sequence 3295	U37230	GENBANK
Sequence 3244	M68864	GENBANK	Sequence 3296	U37518	GENBANK
Sequence 3245	M69177	GENBANK	Sequence 3297	U37558	GENBANK
Sequence 3246	M69181	GENBANK	Sequence 3298	U37690	GENBANK
Sequence 3247	M73547	GENBANK	Sequence 3299	U39840	GENBANK
Sequence 3248	M74509	GENBANK	Sequence 3300	U39945	GENBANK
Sequence 3249	M77142	GENBANK	Sequence 3301	U40272	GENBANK
Sequence 3250	M77830	GENBANK	Sequence 3302	U40572	GENBANK
Sequence 3251	M80783	GENBANK	Sequence 3303	U43701	GENBANK
Sequence 3252	M81757	GENBANK	Sequence 3304	U44839	GENBANK
Sequence 3253	M83205	GENBANK	Sequence 3305	U46751	GENBANK
Sequence 3254	M84711	GENBANK	Sequence 3306	U47674	GENBANK
Sequence 3255	M90054	GENBANK	Sequence 3307	U47742	GENBANK
Sequence 3256	M90309	GENBANK	Sequence 3308	U49957	GENBANK
Sequence 3257	M94345	GENBANK	Sequence 3309	U51134	GENBANK
Sequence 3258	M95627	GENBANK	Sequence 3310	U51678	GENBANK
Sequence 3259	S42658	GENBANK	Sequence 3311	U52969	GENBANK
Sequence 3260	S48196	GENBANK	Sequence 3312	U56255	GENBANK
Sequence 3261	S50015	GENBANK	Sequence 3313	U60116	GENBANK
Sequence 3262	S63912	GENBANK	Sequence 3314	U63289	GENBANK
Sequence 3263	S69272	GENBANK	Sequence 3315	U64315	GENBANK
Sequence 3264	S74678	GENBANK	Sequence 3316	U65785	GENBANK
Sequence 3265	S75755	GENBANK	Sequence 3317	U66197	GENBANK
Sequence 3266	S76756	GENBANK	Sequence 3318	U66469	GENBANK
Sequence 3267	S78203	GENBANK	Sequence 3319	U67171	GENBANK
Sequence 3268	U00930	GENBANK	Sequence 3320	U68140	GENBANK
Sequence 3269	U01184	GENBANK	Sequence 3321	U70323	GENBANK
Sequence 3270	U03688	GENBANK	Sequence 3322	U71363	GENBANK
Sequence 3271	U04209	GENBANK	Sequence 3323	U73824	GENBANK
Sequence 3272	U08815	GENBANK	Sequence 3324	U75272	GENBANK

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Sequence 3325	U75325	GENBANK	Sequence 3377	X74801	GENBANK
Sequence 3326	U77720	GENBANK	Sequence 3378	X75304	GENBANK
Sequence 3327	U80040	GENBANK	Sequence 3379	X75535	GENBANK
Sequence 3328	U80213	GENBANK	Sequence 3380	X77753	GENBANK
Sequence 3329	U82226	GENBANK	Sequence 3381	X78136	GENBANK
Sequence 3330	U82756	GENBANK	Sequence 3382	X81889	GENBANK
Sequence 3331	U83115	GENBANK	Sequence 3383	X85134	GENBANK
Sequence 3332	U89505	GENBANK	Sequence 3384	X87241	GENBANK
Sequence 3333	U90907	GENBANK	Sequence 3385	X87949	GENBANK
Sequence 3334	U90942	GENBANK	Sequence 3386	X92689	GENBANK
Sequence 3335	U92458	GENBANK	Sequence 3387	X94754	GENBANK
Sequence 3336	U95825	GENBANK	Sequence 3388	X97335	GENBANK
Sequence 3337	X01037	GENBANK	Sequence 3389	Y00052	GENBANK
Sequence 3338	X01742	GENBANK	Sequence 3390	Y00815	GENBANK
Sequence 3339	X02530	GENBANK	Sequence 3391	Y09188	GENBANK
Sequence 3340	X02544	GENBANK	Sequence 3392	Y11164	GENBANK
Sequence 3341	X02596	GENBANK	Sequence 3393	Y12781	GENBANK
Sequence 3342	X04098	GENBANK	Sequence 3394	Y15286	GENBANK
Sequence 3343	X05332	GENBANK	Sequence 3395	Z22968	GENBANK
Sequence 3344	X06272	GENBANK	Sequence 3396	Z36715	GENBANK
Sequence 3345	X06747	GENBANK	Sequence 3397	Z47087	GENBANK
Sequence 3346	X12451	GENBANK	Sequence 3398	Z50749	GENBANK
Sequence 3347	X12654	GENBANK	Sequence 3399	AA001999	dbEST
Sequence 3348	X13238	GENBANK	Sequence 3400	AA004255	dbEST
Sequence 3349	X13425	GENBANK	Sequence 3401	AA004869	dbEST
Sequence 3350	X14420	GENBANK	Sequence 3402	AA007389	dbEST
Sequence 3351	X15653	GENBANK	Sequence 3403	AA007474	dbEST
Sequence 3352	X15729	GENBANK	Sequence 3404	AA009527	dbEST
Sequence 3353	X15822	GENBANK	Sequence 3405	AA010167	dbEST
Sequence 3354	X15949	GENBANK	Sequence 3406	AA010284	dbEST
Sequence 3355	X16940	GENBANK	Sequence 3407	AA011297	dbEST
Sequence 3356	X17206	GENBANK	Sequence 3408	AA011656	dbEST
Sequence 3357	X54941	GENBANK	Sequence 3409	AA011707	dbEST
Sequence 3358	X56807	GENBANK	Sequence 3410	AA013018	dbEST
Sequence 3359	X56932	GENBANK	Sequence 3411	AA017512	dbEST
Sequence 3360	X57398	GENBANK	Sequence 3412	AA017614	dbEST
Sequence 3361	X57500	GENBANK	Sequence 3413	AA018102	dbEST
Sequence 3362	X58141	GENBANK	Sequence 3414	AA018202	dbEST
Sequence 3363	X60111	GENBANK	Sequence 3415	AA018345	dbEST
Sequence 3364	X63422	GENBANK	Sequence 3416	AA018888	dbEST
Sequence 3365	X63432	GENBANK	Sequence 3417	AA019538	dbEST
Sequence 3366	X64707	GENBANK	Sequence 3418	AA021544	dbEST
Sequence 3367	X65923	GENBANK	Sequence 3419	AA022965	dbEST
Sequence 3368	X68277	GENBANK	Sequence 3420	AA025287	dbEST
Sequence 3369	X68560	GENBANK	Sequence 3421	AA028103	dbEST
Sequence 3370	X68684	GENBANK	Sequence 3422	AA028145	dbEST
Sequence 3371	X69086	GENBANK	Sequence 3423	AA029143	dbEST
Sequence 3372	X69111	GENBANK	Sequence 3424	AA031367	dbEST
Sequence 3373	X71129	GENBANK	Sequence 3425	AA032194	dbEST
Sequence 3374	X72727	GENBANK	Sequence 3426	AA033869	dbEST
Sequence 3375	X73114	GENBANK	Sequence 3427	AA034094	dbEST
Sequence 3376	X73608	GENBANK	Sequence 3428	AA035549	dbEST

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Sequence 3429	AA035664	dbEST	Sequence 3481	AA082829	dbEST
Sequence 3430	AA035667	dbEST	Sequence 3482	AA083148	dbEST
Sequence 3431	AA035773	dbEST	Sequence 3483	AA083472	dbEST
Sequence 3432	AA037138	dbEST	Sequence 3484	AA083573	dbEST
Sequence 3433	AA037143	dbEST	Sequence 3485	AA083654	dbEST
Sequence 3434	AA041205	dbEST	Sequence 3486	AA083941	dbEST
Sequence 3435	AA041250	dbEST	Sequence 3487	AA085810	dbEST
Sequence 3436	AA043141	dbEST	Sequence 3488	AA086007	dbEST
Sequence 3437	AA044652	dbEST	Sequence 3489	AA086087	dbEST
Sequence 3438	AA044786	dbEST	Sequence 3490	AA088655	dbEST
Sequence 3439	AA045240	dbEST	Sequence 3491	AA088758	dbEST
Sequence 3440	AA045606	dbEST	Sequence 3492	AA088914	dbEST
Sequence 3441	AA045992	dbEST	Sequence 3493	AA089566	dbEST
Sequence 3442	AA047482	dbEST	Sequence 3494	AA090023	dbEST
Sequence 3443	AA047618	dbEST	Sequence 3495	AA090106	dbEST
Sequence 3444	AA053192	dbEST	Sequence 3496	AA090625	dbEST
Sequence 3445	AA053459	dbEST	Sequence 3497	AA091245	dbEST
Sequence 3446	AA054778	dbEST	Sequence 3498	AA092596	dbEST
Sequence 3447	AA055285	dbEST	Sequence 3499	AA092811	dbEST
Sequence 3448	AA055326	dbEST	Sequence 3500	AA093359	dbEST
Sequence 3449	AA055475	dbEST	Sequence 3501	AA095002	dbEST
Sequence 3450	AA055650	dbEST	Sequence 3502	AA096320	dbEST
Sequence 3451	AA056025	dbEST	Sequence 3503	AA096453	dbEST
Sequence 3452	AA056369	dbEST	Sequence 3504	AA098824	dbEST
Sequence 3453	AA057721	dbEST	Sequence 3505	AA099424	dbEST
Sequence 3454	AA058458	dbEST	Sequence 3506	AA099718	dbEST
Sequence 3455	AA058488	dbEST	Sequence 3507	AA100133	dbEST
Sequence 3456	AA058899	dbEST	Sequence 3508	AA101276	dbEST
Sequence 3457	AA063476	dbEST	Sequence 3509	AA101476	dbEST
Sequence 3458	AA063616	dbEST	Sequence 3510	AA102159	dbEST
Sequence 3459	AA063629	dbEST	Sequence 3511	AA111892	dbEST
Sequence 3460	AA064947	dbEST	Sequence 3512	AA112162	dbEST
Sequence 3461	AA065100	dbEST	Sequence 3513	AA113403	dbEST
Sequence 3462	AA065216	dbEST	Sequence 3514	AA113952	dbEST
Sequence 3463	AA069367	dbEST	Sequence 3515	AA114003	dbEST
Sequence 3464	AA069801	dbEST	Sequence 3516	AA114061	dbEST
Sequence 3465	AA069811	dbEST	Sequence 3517	AA115215	dbEST
Sequence 3466	AA069850	dbEST	Sequence 3518	AA120849	dbEST
Sequence 3467	AA070086	dbEST	Sequence 3519	AA121941	dbEST
Sequence 3468	AA074200	dbEST	Sequence 3520	AA125961	dbEST
Sequence 3469	AA074837	dbEST	Sequence 3521	AA126621	dbEST
Sequence 3470	AA075415	dbEST	Sequence 3522	AA126666	dbEST
Sequence 3471	AA075922	dbEST	Sequence 3523	AA126754	dbEST
Sequence 3472	AA076260	dbEST	Sequence 3524	AA127185	dbEST
Sequence 3473	AA076430	dbEST	Sequence 3525	AA127436	dbEST
Sequence 3474	AA076504	dbEST	Sequence 3526	AA127552	dbEST
Sequence 3475	AA078872	dbEST	Sequence 3527	AA128536	dbEST
Sequence 3476	AA079366	dbEST	Sequence 3528	AA128768	dbEST
Sequence 3477	AA079869	dbEST	Sequence 3529	AA130428	dbEST
Sequence 3478	AA080889	dbEST	Sequence 3530	AA130615	dbEST
Sequence 3479	AA082281	dbEST	Sequence 3531	AA131077	dbEST
Sequence 3480	AA082812	dbEST	Sequence 3532	AA131227	dbEST

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Sequence 3533	AA131280	dbEST	Sequence 3585	AA179187	dbEST
Sequence 3534	AA132802	dbEST	Sequence 3586	AA179362	dbEST
Sequence 3535	AA132857	dbEST	Sequence 3587	AA179567	dbEST
Sequence 3536	AA132862	dbEST	Sequence 3588	AA179691	dbEST
Sequence 3537	AA133071	dbEST	Sequence 3589	AA180398	dbEST
Sequence 3538	AA133248	dbEST	Sequence 3590	AA180914	dbEST
Sequence 3539	AA133698	dbEST	Sequence 3591	AA181580	dbEST
Sequence 3540	AA133724	dbEST	Sequence 3592	AA181855	dbEST
Sequence 3541	AA133982	dbEST	Sequence 3593	AA182804	dbEST
Sequence 3542	AA134031	dbEST	Sequence 3594	AA182839	dbEST
Sequence 3543	AA134321	dbEST	Sequence 3595	AA186608	dbEST
Sequence 3544	AA134377	dbEST	Sequence 3596	AA187629	dbEST
Sequence 3545	AA135384	dbEST	Sequence 3597	AA188045	dbEST
Sequence 3546	AA135454	dbEST	Sequence 3598	AA188065	dbEST
Sequence 3547	AA135911	dbEST	Sequence 3599	AA188101	dbEST
Sequence 3548	AA136163	dbEST	Sequence 3600	AA188780	dbEST
Sequence 3549	AA143604	dbEST	Sequence 3601	AA188867	dbEST
Sequence 3550	AA146916	dbEST	Sequence 3602	AA190779	dbEST
Sequence 3551	AA147403	dbEST	Sequence 3603	AA190890	dbEST
Sequence 3552	AA147898	dbEST	Sequence 3604	AA191092	dbEST
Sequence 3553	AA147902	dbEST	Sequence 3605	AA191719	dbEST
Sequence 3554	AA148250	dbEST	Sequence 3606	AA192604	dbEST
Sequence 3555	AA148822	dbEST	Sequence 3607	AA193455	dbEST
Sequence 3556	AA150823	dbEST	Sequence 3608	AA194374	dbEST
Sequence 3557	AA150891	dbEST	Sequence 3609	AA194577	dbEST
Sequence 3558	AA151018	dbEST	Sequence 3610	AA194754	dbEST
Sequence 3559	AA151163	dbEST	Sequence 3611	AA195377	dbEST
Sequence 3560	AA151401	dbEST	Sequence 3612	AA203110	dbEST
Sequence 3561	AA151830	dbEST	Sequence 3613	AA203172	dbEST
Sequence 3562	AA151979	dbEST	Sequence 3614	AA205928	dbEST
Sequence 3563	AA151988	dbEST	Sequence 3615	AA206194	dbEST
Sequence 3564	AA152169	dbEST	Sequence 3616	AA206540	dbEST
Sequence 3565	AA156886	dbEST	Sequence 3617	AA206546	dbEST
Sequence 3566	AA157163	dbEST	Sequence 3618	AA206991	dbEST
Sequence 3567	AA157466	dbEST	Sequence 3619	AA209498	dbEST
Sequence 3568	AA157632	dbEST	Sequence 3620	AA210898	dbEST
Sequence 3569	AA157652	dbEST	Sequence 3621	AA216391	dbEST
Sequence 3570	AA158098	dbEST	Sequence 3622	AA218536	dbEST
Sequence 3571	AA158922	dbEST	Sequence 3623	AA218693	dbEST
Sequence 3572	AA159656	dbEST	Sequence 3624	AA219116	dbEST
Sequence 3573	AA159792	dbEST	Sequence 3625	AA219264	dbEST
Sequence 3574	AA159910	dbEST	Sequence 3626	AA219458	dbEST
Sequence 3575	AA160630	dbEST	Sequence 3627	AA220219	dbEST
Sequence 3576	AA164677	dbEST	Sequence 3628	AA220970	dbEST
Sequence 3577	AA165148	dbEST	Sequence 3629	AA223564	dbEST
Sequence 3578	AA167252	dbEST	Sequence 3630	AA224528	dbEST
Sequence 3579	AA171679	dbEST	Sequence 3631	AA224548	dbEST
Sequence 3580	AA171830	dbEST	Sequence 3632	AA224784	dbEST
Sequence 3581	AA173331	dbEST	Sequence 3633	AA225294	dbEST
Sequence 3582	AA173460	dbEST	Sequence 3634	AA225515	dbEST
Sequence 3583	AA176178	dbEST	Sequence 3635	AA226012	dbEST
Sequence 3584	AA179098	dbEST	Sequence 3636	AA226101	dbEST

# Table 3-1

Sequence 3637	AA226171	dbEST	Sequence 3690	AA293036	dbEST
Sequence 3638	AA226430	dbEST	Sequence 3691	AA293047	dbEST
Sequence 3639	AA227059	dbEST	Sequence 3692	AA293050	dbEST
Sequence 3640	AA227549	dbEST	Sequence 3693	AA296186	dbEST
Sequence 3641	AA228012	dbEST	Sequence 3694	AA296326	dbEST
Sequence 3642	AA229495	dbEST	Sequence 3695	AA296502	dbEST
Sequence 3643	AA232186	dbEST	Sequence 3696	AA296812	dbEST
Sequence 3644	AA233021	dbEST	Sequence 3697	AA296846	dbEST
Sequence 3645	AA233233	dbEST	Sequence 3698	AA296970	dbEST
Sequence 3646	AA233687	dbEST	Sequence 3699	AA297270	dbEST
Sequence 3647	AA234300	dbEST	Sequence 3700	AA297402	dbEST
Sequence 3648	AA234464	dbEST	Sequence 3701	AA298199	dbEST
Sequence 3649	AA234533	dbEST	Sequence 3702	AA298732	dbEST
Sequence 3650	AA234698	dbEST	Sequence 3703	AA298986	dbEST
Sequence 3651	AA235914	dbEST	Sequence 3704	AA299541	dbEST
Sequence 3652	AA236865	dbEST	Sequence 3705	AA299961	dbEST
Sequence 3653	AA242891	dbEST	Sequence 3706	AA300065	dbEST
Sequence 3654	AA242951	dbEST	Sequence 3707	AA300262	dbEST
Sequence 3655	AA244003	dbEST	Sequence 3708	AA301753	dbEST
Sequence 3656	AA244099	dbEST	Sequence 3709	AA301983	dbEST
Sequence 3657	AA249118	dbEST	Sequence 3710	AA302919	dbEST
Sequence 3658	AA250903	dbEST	Sequence 3711	AA302986	dbEST
Sequence 3659	AA251201	dbEST	Sequence 3712	AA303184	dbEST
Sequence 3660	AA251262	dbEST	Sequence 3713	AA303334	dbEST
Sequence 3661	AA255576	dbEST	Sequence 3714	AA303594	dbEST
Sequence 3662	AA256248	dbEST	Sequence 3715	AA303657	dbEST
Sequence 3663	AA256403	dbEST	Sequence 3716	AA303696	dbEST
Sequence 3664	AA256724	dbEST	Sequence 3717	AA304025	dbEST
Sequence 3665	AA258750	dbEST	Sequence 3718	AA305121	dbEST
Sequence 3666	AA259025	dbEST	Sequence 3719	AA305231	dbEST
Sequence 3667	AA262494	dbEST	Sequence 3720	AA305315	dbEST
Sequence 3668	AA263002	dbEST	Sequence 3721	AA305333	dbEST
Sequence 3669	AA263040	dbEST	Sequence 3722	AA305566	dbEST
Sequence 3670	AA263145	dbEST	Sequence 3723	AA305895	dbEST
Sequence 3671	AA278642	dbEST	Sequence 3724	AA305951	dbEST
Sequence 3672	AA278729	dbEST	Sequence 3725	AA306028	dbEST
Sequence 3673	AA280080	dbEST	Sequence 3726	AA306129	dbEST
Sequence 3674	AA280089	dbEST	Sequence 3727	AA306402	dbEST
Sequence 3675	AA280876	dbEST	Sequence 3728	AA306668	dbEST
Sequence 3676	AA282734	dbEST	Sequence 3729	AA306983	dbEST
Sequence 3677	AA283746	dbEST	Sequence 3730	AA307101	dbEST
Sequence 3678	AA284642	dbEST	Sequence 3731	AA307579	dbEST
Sequence 3679	AA284806	dbEST	Sequence 3732	AA307590	dbEST
Sequence 3680	AA286754	dbEST	Sequence 3733	AA307728	dbEST
Sequence 3681	AA286841	dbEST	Sequence 3734	AA307746	dbEST
Sequence 3682	AA287561	dbEST	Sequence 3735	AA307789	dbEST
Sequence 3683	AA287589	dbEST	Sequence 3736	AA307941	dbEST
Sequence 3684	AA291220	dbEST	Sequence 3737	AA308063	dbEST
Sequence 3685	AA291788	dbEST	Sequence 3738	AA308269	dbEST
Sequence 3686	AA292179	dbEST	Sequence 3739	AA308533	dbEST
Sequence 3687	AA292739	dbEST	Sequence 3740	AA308942	dbEST
Sequence 3688	AA292796	dbEST		AA308978	dbEST

**Table 3-1**

Sequence 3741	AA309410	dbEST	Sequence 3783	AA318544	dbEST
Sequence 3742	AA309812	dbEST	Sequence 3794	AA319139	dbEST
Sequence 3743	AA310163	dbEST	Sequence 3795	AA319538	dbEST
Sequence 3744	AA310181	dbEST	Sequence 3796	AA320701	dbEST
Sequence 3745	AA310292	dbEST	Sequence 3797	AA322246	dbEST
Sequence 3746	AA310460	dbEST	Sequence 3798	AA324251	dbEST
Sequence 3747	AA310561	dbEST	Sequence 3799	AA324411	dbEST
Sequence 3748	AA310591	dbEST	Sequence 3800	AA324705	dbEST
Sequence 3749	AA310928	dbEST	Sequence 3801	AA324831	dbEST
Sequence 3750	AA311044	dbEST	Sequence 3802	AA325221	dbEST
Sequence 3751	AA311227	dbEST	Sequence 3803	AA325658	dbEST
Sequence 3752	AA312177	dbEST	Sequence 3804	AA326793	dbEST
Sequence 3753	AA312242	dbEST	Sequence 3805	AA327228	dbEST
Sequence 3754	AA312444	dbEST	Sequence 3806	AA327546	dbEST
Sequence 3755	AA312448	dbEST	Sequence 3807	AA327611	dbEST
Sequence 3756	AA312503	dbEST	Sequence 3808	AA330234	dbEST
Sequence 3757	AA313200	dbEST	Sequence 3809	AA330784	dbEST
Sequence 3758	AA313208	dbEST	Sequence 3810	AA331859	dbEST
Sequence 3759	AA313418	dbEST	Sequence 3811	AA332556	dbEST
Sequence 3760	AA313549	dbEST	Sequence 3812	AA332667	dbEST
Sequence 3761	AA313828	dbEST	Sequence 3813	AA333307	dbEST
Sequence 3762	AA313837	dbEST	Sequence 3814	AA333526	dbEST
Sequence 3763	AA313933	dbEST	Sequence 3815	AA334452	dbEST
Sequence 3764	AA313996	dbEST	Sequence 3816	AA336081	dbEST
Sequence 3765	AA314061	dbEST	Sequence 3817	AA336683	dbEST
Sequence 3766	AA314181	dbEST	Sequence 3818	AA336740	dbEST
Sequence 3767	AA314188	dbEST	Sequence 3819	AA338257	dbEST
Sequence 3768	AA314202	dbEST	Sequence 3820	AA339065	dbEST
Sequence 3769	AA314241	dbEST	Sequence 3821	AA339151	dbEST
Sequence 3770	AA314355	dbEST	Sequence 3822	AA340654	dbEST
Sequence 3771	AA314465	dbEST	Sequence 3823	AA340719	dbEST
Sequence 3772	AA314748	dbEST	Sequence 3824	AA344393	dbEST
Sequence 3773	AA314757	dbEST	Sequence 3825	AA345558	dbEST
Sequence 3774	AA314847	dbEST	Sequence 3826	AA346918	dbEST
Sequence 3775	AA314862	dbEST	Sequence 3827	AA347293	dbEST
Sequence 3776	AA314882	dbEST	Sequence 3828	AA347390	dbEST
Sequence 3777	AA314961	dbEST	Sequence 3829	AA347889	dbEST
Sequence 3778	AA315069	dbEST	Sequence 3830	AA349118	dbEST
Sequence 3779	AA315172	dbEST	Sequence 3831	AA350206	dbEST
Sequence 3780	AA315215	dbEST	Sequence 3832	AA350228	dbEST
Sequence 3781	AA315321	dbEST	Sequence 3833	AA350661	dbEST
Sequence 3782	AA315406	dbEST	Sequence 3834	AA352755	dbEST
Sequence 3783	AA315444	dbEST	Sequence 3835	AA354391	dbEST
Sequence 3784	AA315497	dbEST	Sequence 3836	AA355003	dbEST
Sequence 3785	AA315762	dbEST	Sequence 3837	AA355196	dbEST
Sequence 3786	AA315950	dbEST	Sequence 3838	AA355363	dbEST
Sequence 3787	AA315993	dbEST	Sequence 3839	AA355451	dbEST
Sequence 3788	AA316199	dbEST	Sequence 3840	AA359003	dbEST
Sequence 3789	AA316322	dbEST	Sequence 3841	AA359284	dbEST
Sequence 3790	AA317096	dbEST	Sequence 3842	AA359514	dbEST
Sequence 3791	AA317937	dbEST	Sequence 3843	AA361042	dbEST
Sequence 3792	AA317956	dbEST	Sequence 3844	AA362778	dbEST

# Table 3-1

Sequence 3845	AA362825	dbEST	Sequence 3897	AA425613	dbEST
Sequence 3846	AA363142	dbEST	Sequence 3898	AA426235	dbEST
Sequence 3847	AA364498	dbEST	Sequence 3899	AA426391	dbEST
Sequence 3848	AA365150	dbEST	Sequence 3900	AA427471	dbEST
Sequence 3849	AA366518	dbEST	Sequence 3901	AA427596	dbEST
Sequence 3850	AA367581	dbEST	Sequence 3902	AA428096	dbEST
Sequence 3851	AA368810	dbEST	Sequence 3903	AA429173	dbEST
Sequence 3852	AA371017	dbEST	Sequence 3904	AA430304	dbEST
Sequence 3853	AA371265	dbEST	Sequence 3905	AA430478	dbEST
Sequence 3854	AA373756	dbEST	Sequence 3906	AA430597	dbEST
Sequence 3855	AA374222	dbEST	Sequence 3907	AA430628	dbEST
Sequence 3856	AA374766	dbEST	Sequence 3908	AA434028	dbEST
Sequence 3857	AA375483	dbEST	Sequence 3909	AA436008	dbEST
Sequence 3858	AA377218	dbEST	Sequence 3910	AA436762	dbEST
Sequence 3859	AA378059	dbEST	Sequence 3911	AA436769	dbEST
Sequence 3860	AA378226	dbEST	Sequence 3912	AA437277	dbEST
Sequence 3861	AA379015	dbEST	Sequence 3913	AA442287	dbEST
Sequence 3862	AA385388	dbEST	Sequence 3914	AA442517	dbEST
Sequence 3863	AA386267	dbEST	Sequence 3915	AA442687	dbEST
Sequence 3864	AA393259	dbEST	Sequence 3916	AA443659	dbEST
Sequence 3865	AA393906	dbEST	Sequence 3917	AA446071	dbEST
Sequence 3866	AA394176	dbEST	Sequence 3918	AA446716	dbEST
Sequence 3867	AA394299	dbEST	Sequence 3919	AA446958	dbEST
Sequence 3868	AA397802	dbEST	Sequence 3920	AA447885	dbEST
Sequence 3869	AA399239	dbEST	Sequence 3921	AA448118	dbEST
Sequence 3870	AA399393	dbEST	Sequence 3922	AA448950	dbEST
Sequence 3871	AA399637	dbEST	Sequence 3923	AA450168	dbEST
Sequence 3872	AA401603	dbEST	Sequence 3924	AA451733	dbEST
Sequence 3873	AA401957	dbEST	Sequence 3925	AA452012	dbEST
Sequence 3874	AA402792	dbEST	Sequence 3926	AA453445	dbEST
Sequence 3875	AA403235	dbEST	Sequence 3927	AA453562	dbEST
Sequence 3876	AA403322	dbEST	Sequence 3928	AA454027	dbEST
Sequence 3877	AA404444	dbEST	Sequence 3929	AA454065	dbEST
Sequence 3878	AA404642	dbEST	Sequence 3930	AA454912	dbEST
Sequence 3879	AA404646	dbEST	Sequence 3931	AA455299	dbEST
Sequence 3880	AA405640	dbEST	Sequence 3932	AA456372	dbEST
Sequence 3881	AA406402	dbEST	Sequence 3933	AA457021	dbEST
Sequence 3882	AA410700	dbEST	Sequence 3934	AA458804	dbEST
Sequence 3883	AA411201	dbEST	Sequence 3935	AA459528	dbEST
Sequence 3884	AA416781	dbEST	Sequence 3936	AA460511	dbEST
Sequence 3885	AA418473	dbEST	Sequence 3937	AA460755	dbEST
Sequence 3886	AA420523	dbEST	Sequence 3938	AA460969	dbEST
Sequence 3887	AA420647	dbEST	Sequence 3939	AA464763	dbEST
Sequence 3888	AA420690	dbEST	Sequence 3940	AA465494	dbEST
Sequence 3889	AA420845	dbEST	Sequence 3941	AA465697	dbEST
Sequence 3890	AA420852	dbEST	Sequence 3942	AA467864	dbEST
Sequence 3891	AA421213	dbEST	Sequence 3943	AA467974	dbEST
Sequence 3892	AA421274	dbEST	Sequence 3944	AA468839	dbEST
Sequence 3893	AA421545	dbEST	Sequence 3945	AA469129	dbEST
Sequence 3894	AA424561	dbEST	Sequence 3946	AA469238	dbEST
Sequence 3895	AA424655	dbEST	Sequence 3947	AA469304	dbEST
Sequence 3896	AA424658	dbEST	Sequence 3948	AA469406	dbEST

# Table 3-1

Sequence 3949	AA471070	dbEST	Sequence 4001	AA522473	dbEST
Sequence 3950	AA476207	dbEST	Sequence 4002	AA523006	dbEST
Sequence 3951	AA476543	dbEST	Sequence 4003	AA523902	dbEST
Sequence 3952	AA476648	dbEST	Sequence 4004	AA524258	dbEST
Sequence 3953	AA476679	dbEST	Sequence 4005	AA525497	dbEST
Sequence 3954	AA477579	dbEST	Sequence 4006	AA525801	dbEST
Sequence 3955	AA477848	dbEST	Sequence 4007	AA526187	dbEST
Sequence 3956	AA478298	dbEST	Sequence 4008	AA526472	dbEST
Sequence 3957	AA478522	dbEST	Sequence 4009	AA526894	dbEST
Sequence 3958	AA478647	dbEST	Sequence 4010	AA528202	dbEST
Sequence 3959	AA479287	dbEST	Sequence 4011	AA531561	dbEST
Sequence 3960	AA479809	dbEST	Sequence 4012	AA532461	dbEST
Sequence 3961	AA480051	dbEST	Sequence 4013	AA532852	dbEST
Sequence 3962	AA482522	dbEST	Sequence 4014	AA533001	dbEST
Sequence 3963	AA482884	dbEST	Sequence 4015	AA533940	dbEST
Sequence 3964	AA484104	dbEST	Sequence 4016	AA534419	dbEST
Sequence 3965	AA484284	dbEST	Sequence 4017	AA534543	dbEST
Sequence 3966	AA484568	dbEST	Sequence 4018	AA535610	dbEST
Sequence 3967	AA484752	dbEST	Sequence 4019	AA535695	dbEST
Sequence 3968	AA485853	dbEST	Sequence 4020	AA535837	dbEST
Sequence 3969	AA486838	dbEST	Sequence 4021	AA536175	dbEST
Sequence 3970	AA488014	dbEST	Sequence 4022	AA548238	dbEST
Sequence 3971	AA488592	dbEST	Sequence 4023	AA548600	dbEST
Sequence 3972	AA488954	dbEST	Sequence 4024	AA551065	dbEST
Sequence 3973	AA489124	dbEST	Sequence 4025	AA551252	dbEST
Sequence 3974	AA489160	dbEST	Sequence 4026	AA551773	dbEST
Sequence 3975	AA489323	dbEST	Sequence 4027	AA552154	dbEST
Sequence 3976	AA491983	dbEST	Sequence 4028	AA552253	dbEST
Sequence 3977	AA492042	dbEST	Sequence 4029	AA552570	dbEST
Sequence 3978	AA492256	dbEST	Sequence 4030	AA555160	dbEST
Sequence 3979	AA494295	dbEST	Sequence 4031	AA557888	dbEST
Sequence 3980	AA494489	dbEST	Sequence 4032	AA558976	dbEST
Sequence 3981	AA503040	dbEST	Sequence 4033	AA564005	dbEST
Sequence 3982	AA503330	dbEST	Sequence 4034	AA564017	dbEST
Sequence 3983	AA503943	dbEST	Sequence 4035	AA565044	dbEST
Sequence 3984	AA504703	dbEST	Sequence 4036	AA565448	dbEST
Sequence 3985	AA504969	dbEST	Sequence 4037	AA569247	dbEST
Sequence 3986	AA505327	dbEST	Sequence 4038	AA569354	dbEST
Sequence 3987	AA505568	dbEST	Sequence 4039	AA569439	dbEST
Sequence 3988	AA506299	dbEST	Sequence 4040	AA570171	dbEST
Sequence 3989	AA506304	dbEST	Sequence 4041	AA570182	dbEST
Sequence 3990	AA506459	dbEST	Sequence 4042	AA572808	dbEST
Sequence 3991	AA507065	dbEST	Sequence 4043	AA572938	dbEST
Sequence 3992	AA507201	dbEST	Sequence 4044	AA573557	dbEST
Sequence 3993	AA507217	dbEST	Sequence 4045	AA573559	dbEST
Sequence 3994	AA507472	dbEST	Sequence 4046	AA573575	dbEST
Sequence 3995	AA507595	dbEST	Sequence 4047	AA573737	dbEST
Sequence 3996	AA508861	dbEST	Sequence 4048	AA573762	dbEST
Sequence 3997	AA513597	dbEST	Sequence 4049	AA573787	dbEST
Sequence 3998	AA514775	dbEST	Sequence 4050	AA573811	dbEST
Sequence 3999	AA515132	dbEST	Sequence 4051	AA573817	dbEST
Sequence 4000	AA516441	dbEST	Sequence 4052	AA573910	dbEST



# Table 3-1

Sequence 4053	AA576252	dbEST	Sequence 4105	AA669544	dbEST
Sequence 4054	AA576404	dbEST	Sequence 4106	AA675892	dbEST
Sequence 4055	AA578265	dbEST	Sequence 4107	AA678873	dbEST
Sequence 4056	AA578773	dbEST	Sequence 4108	AA683546	dbEST
Sequence 4057	AA578904	dbEST	Sequence 4109	AA687733	dbEST
Sequence 4058	AA578976	dbEST	Sequence 4110	AA693922	dbEST
Sequence 4059	AA579596	dbEST	Sequence 4111	AA694186	dbEST
Sequence 4060	AA581523	dbEST	Sequence 4112	AA694477	dbEST
Sequence 4061	AA582489	dbEST	Sequence 4113	AA700876	dbEST
Sequence 4062	AA582728	dbEST	Sequence 4114	AA703004	dbEST
Sequence 4063	AA582805	dbEST	Sequence 4115	AA703925	dbEST
Sequence 4064	AA583801	dbEST	Sequence 4116	AA704690	dbEST
Sequence 4065	AA586744	dbEST	Sequence 4117	AA705054	dbEST
Sequence 4066	AA588083	dbEST	Sequence 4118	AA706797	dbEST
Sequence 4067	AA588358	dbEST	Sequence 4119	AA709070	dbEST
Sequence 4068	AA588801	dbEST	Sequence 4120	AA713760	dbEST
Sequence 4069	AA592947	dbEST	Sequence 4121	AA714902	dbEST
Sequence 4070	AA593385	dbEST	Sequence 4122	AA715036	dbEST
Sequence 4071	AA593879	dbEST	Sequence 4123	AA719530	dbEST
Sequence 4072	AA595193	dbEST	Sequence 4124	AA721298	dbEST
Sequence 4073	AA595471	dbEST	Sequence 4125	AA722090	dbEST
Sequence 4074	AA595582	dbEST	Sequence 4126	AA744876	dbEST
Sequence 4075	AA598598	dbEST	Sequence 4127	AA757282	dbEST
Sequence 4076	AA599229	dbEST	Sequence 4128	AA758023	dbEST
Sequence 4077	AA599650	dbEST	Sequence 4129	AA761562	dbEST
Sequence 4078	AA602472	dbEST	Sequence 4130	AA761831	dbEST
Sequence 4079	AA602773	dbEST	Sequence 4131	AA769102	dbEST
Sequence 4080	AA602979	dbEST	Sequence 4132	AA769142	dbEST
Sequence 4081	AA603572	dbEST	Sequence 4133	AA770690	dbEST
Sequence 4082	AA610734	dbEST	Sequence 4134	AA772736	dbEST
Sequence 4083	AA614274	dbEST	Sequence 4135	AA775824	dbEST
Sequence 4084	AA620334	dbEST	Sequence 4136	AA776709	dbEST
Sequence 4085	AA630382	dbEST	Sequence 4137	AA776740	dbEST
Sequence 4086	AA631152	dbEST	Sequence 4138	AA777265	dbEST
Sequence 4087	AA632954	dbEST	Sequence 4139	AA777489	dbEST
Sequence 4088	AA633399	dbEST	Sequence 4140	AA778571	dbEST
Sequence 4089	AA633909	dbEST	Sequence 4141	AA804879	dbEST
Sequence 4090	AA640458	dbEST	Sequence 4142	AA808146	dbEST
Sequence 4091	AA640716	dbEST	Sequence 4143	AA808466	dbEST
Sequence 4092	AA641074	dbEST	Sequence 4144	AA813108	dbEST
Sequence 4093	AA644678	dbEST	Sequence 4145	AA813287	dbEST
Sequence 4094	AA648209	dbEST	Sequence 4146	AA814412	dbEST
Sequence 4095	AA649298	dbEST	Sequence 4147	AA814634	dbEST
Sequence 4096	AA650241	dbEST	Sequence 4148	AA815173	dbEST
Sequence 4097	AA654709	dbEST	Sequence 4149	AA824395	dbEST
Sequence 4098	AA658207	dbEST	Sequence 4150	AA826491	dbEST
Sequence 4099	AA659179	dbEST	Sequence 4151	AA832480	dbEST
Sequence 4100	AA659725	dbEST	Sequence 4152	AA835490	dbEST
Sequence 4101	AA661464	dbEST	Sequence 4153	AA836233	dbEST
Sequence 4102	AA661927	dbEST	Sequence 4154	AA838431	dbEST
Sequence 4103	AA664482	dbEST	Sequence 4155	AA843216	dbEST
Sequence 4104	AA669484	dbEST	Sequence 4156	AA843683	dbEST

# Table 3-1

Sequence 4157	AA844081	dbEST	Sequence 4209	AI039301	dbEST
Sequence 4158	AA844230	dbEST	Sequence 4210	AI039813	dbEST
Sequence 4159	AA854305	dbEST	Sequence 4211	AI040339	dbEST
Sequence 4160	AA856914	dbEST	Sequence 4212	AI042002	dbEST
Sequence 4161	AA864975	dbEST	Sequence 4213	AI049971	dbEST
Sequence 4162	AA868337	dbEST	Sequence 4214	AI050826	dbEST
Sequence 4163	AA873459	dbEST	Sequence 4215	AI051957	dbEST
Sequence 4164	AA877796	dbEST	Sequence 4216	AI052061	dbEST
Sequence 4165	AA877864	dbEST	Sequence 4217	AI061610	dbEST
Sequence 4166	AA883132	dbEST	Sequence 4218	AI064931	dbEST
Sequence 4167	AA883580	dbEST	Sequence 4219	AI075041	dbEST
Sequence 4168	AA886497	dbEST	Sequence 4220	AI077488	dbEST
Sequence 4169	AA896959	dbEST	Sequence 4221	AI077719	dbEST
Sequence 4170	AA902256	dbEST	Sequence 4222	AI078217	dbEST
Sequence 4171	AA907068	dbEST	Sequence 4223	AI081133	dbEST
Sequence 4172	AA926992	dbEST	Sequence 4224	AI081379	dbEST
Sequence 4173	AA932059	dbEST	Sequence 4225	AI081945	dbEST
Sequence 4174	AA933573	dbEST	Sequence 4226	AI082235	dbEST
Sequence 4175	AA936089	dbEST	Sequence 4227	AI085263	dbEST
Sequence 4176	AA938156	dbEST	Sequence 4228	AI085381	dbEST
Sequence 4177	AA947441	dbEST	Sequence 4229	AI087080	dbEST
Sequence 4178	AA948037	dbEST	Sequence 4230	AI088914	dbEST
Sequence 4179	AA948223	dbEST	Sequence 4231	AI089875	dbEST
Sequence 4180	AA954079	dbEST	Sequence 4232	AI090012	dbEST
Sequence 4181	AA962587	dbEST	Sequence 4233	AI090827	dbEST
Sequence 4182	AA969613	dbEST	Sequence 4234	AI091136	dbEST
Sequence 4183	AA970266	dbEST	Sequence 4235	AI091516	dbEST
Sequence 4184	AA970314	dbEST	Sequence 4236	AI091814	dbEST
Sequence 4185	AA970570	dbEST	Sequence 4237	AI094634	dbEST
Sequence 4186	AA977406	dbEST	Sequence 4238	AI097214	dbEST
Sequence 4187	AA978126	dbEST	Sequence 4239	AI114433	dbEST
Sequence 4188	AA983832	dbEST	Sequence 4240	AI114651	dbEST
Sequence 4189	AA984173	dbEST	Sequence 4241	AI125166	dbEST
Sequence 4190	AA984744	dbEST	Sequence 4242	AI126653	dbEST
Sequence 4191	AA987442	dbEST	Sequence 4243	AI127526	dbEST
Sequence 4192	AA988520	dbEST	Sequence 4244	AI127556	dbEST
Sequence 4193	AB005621	dbEST	Sequence 4245	AI128883	dbEST
Sequence 4194	AF017688	dbEST	Sequence 4246	AI128949	dbEST
Sequence 4195	AF062725	dbEST	Sequence 4247	AI131444	dbEST
Sequence 4196	AF062729	dbEST	Sequence 4248	AI133208	dbEST
Sequence 4197	AI004596	dbEST	Sequence 4249	AI139036	dbEST
Sequence 4198	AI015574	dbEST	Sequence 4250	AI139394	dbEST
Sequence 4199	AI016169	dbEST	Sequence 4251	AI140096	dbEST
Sequence 4200	AI017022	dbEST	Sequence 4252	AI140210	dbEST
Sequence 4201	AI017959	dbEST	Sequence 4253	AI141189	dbEST
Sequence 4202	AI018617	dbEST	Sequence 4254	AI141583	dbEST
Sequence 4203	AI024907	dbEST	Sequence 4255	AI141732	dbEST
Sequence 4204	AI025376	dbEST	Sequence 4256	AI148251	dbEST
Sequence 4205	AI027516	dbEST	Sequence 4257	AI150619	dbEST
Sequence 4206	AI034024	dbEST	Sequence 4258	AI160426	dbEST
Sequence 4207	AI038048	dbEST	Sequence 4259	AI161253	dbEST
Sequence 4208	AI039227	dbEST	Sequence 4260	AI167801	dbEST

# Table 3-1

Sequence 4261	AI184320	dbEST	Sequence 4313	AI267677	dbEST
Sequence 4262	AI189339	dbEST	Sequence 4314	AI267808	dbEST
Sequence 4263	AI189345	dbEST	Sequence 4315	AI267941	dbEST
Sequence 4264	AI189386	dbEST	Sequence 4316	AI269883	dbEST
Sequence 4265	AI189894	dbEST	Sequence 4317	AI271740	dbEST
Sequence 4266	AI190648	dbEST	Sequence 4318	AI274786	dbEST
Sequence 4267	AI192780	dbEST	Sequence 4319	AI275114	dbEST
Sequence 4268	AI192784	dbEST	Sequence 4320	AI275175	dbEST
Sequence 4269	AI193675	dbEST	Sequence 4321	AI277434	dbEST
Sequence 4270	AI198311	dbEST	Sequence 4322	AI277739	dbEST
Sequence 4271	AI198771	dbEST	Sequence 4323	AI279141	dbEST
Sequence 4272	AI198986	dbEST	Sequence 4324	AI281882	dbEST
Sequence 4273	AI199641	dbEST	Sequence 4325	AI284011	dbEST
Sequence 4274	AI199681	dbEST	Sequence 4326	AI287972	dbEST
Sequence 4275	AI199773	dbEST	Sequence 4327	AI288388	dbEST
Sequence 4276	AI200324	dbEST	Sequence 4328	AI288730	dbEST
Sequence 4277	AI200444	dbEST	Sequence 4329	AI288929	dbEST
Sequence 4278	AI201261	dbEST	Sequence 4330	AI289120	dbEST
Sequence 4279	AI203141	dbEST	Sequence 4331	AI291583	dbEST
Sequence 4280	AI203350	dbEST	Sequence 4332	AI292299	dbEST
Sequence 4281	AI207650	dbEST	Sequence 4333	AI306464	dbEST
Sequence 4282	AI214043	dbEST	Sequence 4334	AI309401	dbEST
Sequence 4283	AI216966	dbEST	Sequence 4335	AI312049	dbEST
Sequence 4284	AI216986	dbEST	Sequence 4336	AI332904	dbEST
Sequence 4285	AI216988	dbEST	Sequence 4337	AI333548	dbEST
Sequence 4286	AI217003	dbEST	Sequence 4338	AI335269	dbEST
Sequence 4287	AI217009	dbEST	Sequence 4339	AI340246	dbEST
Sequence 4288	AI217021	dbEST	Sequence 4340	AI341076	dbEST
Sequence 4289	AI219174	dbEST	Sequence 4341	AI341334	dbEST
Sequence 4290	AI244335	dbEST	Sequence 4342	AI341352	dbEST
Sequence 4291	AI246167	dbEST	Sequence 4343	AI343091	dbEST
Sequence 4292	AI248514	dbEST	Sequence 4344	AI343604	dbEST
Sequence 4293	AI253288	dbEST	Sequence 4345	AI346657	dbEST
Sequence 4294	AI253300	dbEST	Sequence 4346	AI346809	dbEST
Sequence 4295	AI253304	dbEST	Sequence 4347	AI347155	dbEST
Sequence 4296	AI253319	dbEST	Sequence 4348	AI349452	dbEST
Sequence 4297	AI253330	dbEST	Sequence 4349	AI350388	dbEST
Sequence 4298	AI253335	dbEST	Sequence 4350	AI352032	dbEST
Sequence 4299	AI253367	dbEST	Sequence 4351	AI356718	dbEST
Sequence 4300	AI253436	dbEST	Sequence 4352	AI360870	dbEST
Sequence 4301	AI261763	dbEST	Sequence 4353	AI361965	dbEST
Sequence 4302	AI262139	dbEST	Sequence 4354	AI362490	dbEST
Sequence 4303	AI267158	dbEST	Sequence 4355	AI365603	dbEST
Sequence 4304	AI267162	dbEST	Sequence 4356	AI366365	dbEST
Sequence 4305	AI267185	dbEST	Sequence 4357	AI366376	dbEST
Sequence 4306	AI267282	dbEST	Sequence 4358	AI372599	dbEST
Sequence 4307	AI267307	dbEST	Sequence 4359	AI373323	dbEST
Sequence 4308	AI267397	dbEST	Sequence 4360	AI375465	dbEST
Sequence 4309	AI267502	dbEST	Sequence 4361	AI381996	dbEST
Sequence 4310	AI267574	dbEST	Sequence 4362	AI394173	dbEST
Sequence 4311	AI267596	dbEST	Sequence 4363	AI394498	dbEST
Sequence 4312	AI267652	dbEST	Sequence 4364	AI417833	dbEST

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Sequence 4365	AI421412	dbEST	Sequence 4417	AI684039	dbEST
Sequence 4366	AI432603	dbEST	Sequence 4418	AI684170	dbEST
Sequence 4367	AI434025	dbEST	Sequence 4419	AI686957	dbEST
Sequence 4368	AI434639	dbEST	Sequence 4420	AI690236	dbEST
Sequence 4369	AI436714	dbEST	Sequence 4421	AI692940	dbEST
Sequence 4370	AI439173	dbEST	Sequence 4422	AI692995	dbEST
Sequence 4371	AI453358	dbEST	Sequence 4423	AI694572	dbEST
Sequence 4372	AI473779	dbEST	Sequence 4424	AI697815	dbEST
Sequence 4373	AI476254	dbEST	Sequence 4425	AI701119	dbEST
Sequence 4374	AI499378	dbEST	Sequence 4426	AI708995	dbEST
Sequence 4375	AI499439	dbEST	Sequence 4427	AI732541	dbEST
Sequence 4376	AI499933	dbEST	Sequence 4428	AI732557	dbEST
Sequence 4377	AI521270	dbEST	Sequence 4429	AI744451	dbEST
Sequence 4378	AI525426	dbEST	Sequence 4430	AI745280	dbEST
Sequence 4379	AI525773	dbEST	Sequence 4431	AI751583	dbEST
Sequence 4380	AI525843	dbEST	Sequence 4432	AI751914	dbEST
Sequence 4381	AI537498	dbEST	Sequence 4433	AI752822	dbEST
Sequence 4382	AI538681	dbEST	Sequence 4434	AI753269	dbEST
Sequence 4383	AI547284	dbEST	Sequence 4435	AI754013	dbEST
Sequence 4384	AI547309	dbEST	Sequence 4436	AI755085	dbEST
Sequence 4385	AI557226	dbEST	Sequence 4437	AI761508	dbEST
Sequence 4386	AI557495	dbEST	Sequence 4438	AI761728	dbEST
Sequence 4387	AI557626	dbEST	Sequence 4439	AI768848	dbEST
Sequence 4388	AI559999	dbEST	Sequence 4440	AI769145	dbEST
Sequence 4389	AI566084	dbEST	Sequence 4441	AI791719	dbEST
Sequence 4390	AI566490	dbEST	Sequence 4442	AI802998	dbEST
Sequence 4391	AI570942	dbEST	Sequence 4443	AI806161	dbEST
Sequence 4392	AI571069	dbEST	Sequence 4444	AI806996	dbEST
Sequence 4393	AI580160	dbEST	Sequence 4445	AI815416	dbEST
Sequence 4394	AI587118	dbEST	Sequence 4446	AI815449	dbEST
Sequence 4395	AI588087	dbEST	Sequence 4447	AI815497	dbEST
Sequence 4396	AI589633	dbEST	Sequence 4448	AI815829	dbEST
Sequence 4397	AI608968	dbEST	Sequence 4449	AI815966	dbEST
Sequence 4398	AI628609	dbEST	Sequence 4450	AI815976	dbEST
Sequence 4399	AI630282	dbEST	Sequence 4451	AI816033	dbEST
Sequence 4400	AI636577	dbEST	Sequence 4452	AI820995	dbEST
Sequence 4401	AI636911	dbEST	Sequence 4453	AI829303	dbEST
Sequence 4402	AI638327	dbEST	Sequence 4454	AI858066	dbEST
Sequence 4403	AI648682	dbEST	Sequence 4455	AI860714	dbEST
Sequence 4404	AI651069	dbEST	Sequence 4456	AI866262	dbEST
Sequence 4405	AI651974	dbEST	Sequence 4457	AI871477	dbEST
Sequence 4406	AI651976	dbEST	Sequence 4458	AI872085	dbEST
Sequence 4407	AI652084	dbEST	Sequence 4459	AI878878	dbEST
Sequence 4408	AI652555	dbEST	Sequence 4460	AI879010	dbEST
Sequence 4409	AI660243	dbEST	Sequence 4461	AI879059	dbEST
Sequence 4410	AI669253	dbEST	Sequence 4462	AI879242	dbEST
Sequence 4411	AI670002	dbEST	Sequence 4463	AI884578	dbEST
Sequence 4412	AI672362	dbEST	Sequence 4464	AI885833	dbEST
Sequence 4413	AI674583	dbEST	Sequence 4465	AI886418	dbEST
Sequence 4414	AI675889	dbEST	Sequence 4466	AI887517	dbEST
Sequence 4415	AI679629	dbEST	Sequence 4467	AI887664	dbEST
Sequence 4416	AI683183	dbEST	Sequence 4468	AI911703	dbEST

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Sequence 4469	AI914133	dbEST	Sequence 4521	AW026680	dbEST
Sequence 4470	AI917649	dbEST	Sequence 4522	AW027007	dbEST
Sequence 4471	AI924598	dbEST	Sequence 4523	AW027219	dbEST
Sequence 4472	AI929113	dbEST	Sequence 4524	AW029146	dbEST
Sequence 4473	AI929453	dbEST	Sequence 4525	AW058559	dbEST
Sequence 4474	AI934153	dbEST	Sequence 4526	AW062376	dbEST
Sequence 4475	AI934595	dbEST	Sequence 4527	AW071906	dbEST
Sequence 4476	AI935291	dbEST	Sequence 4528	AW075433	dbEST
Sequence 4477	AI935816	dbEST	Sequence 4529	AW084950	dbEST
Sequence 4478	AI937060	dbEST	Sequence 4530	AW129510	dbEST
Sequence 4479	AI951021	dbEST	Sequence 4531	AW132009	dbEST
Sequence 4480	AI951536	dbEST	Sequence 4532	AW134746	dbEST
Sequence 4481	AI954800	dbEST	Sequence 4533	AW134867	dbEST
Sequence 4482	AI962736	dbEST	Sequence 4534	AW151254	dbEST
Sequence 4483	AI973126	dbEST	Sequence 4535	AW152107	dbEST
Sequence 4484	AI973218	dbEST	Sequence 4536	AW160669	dbEST
Sequence 4485	AI983430	dbEST	Sequence 4537	AW161467	dbEST
Sequence 4486	AI991281	dbEST	Sequence 4538	AW161705	dbEST
Sequence 4487	AL035886	dbEST	Sequence 4539	AW163208	dbEST
Sequence 4488	AL035985	dbEST	Sequence 4540	AW163441	dbEST
Sequence 4489	AL036026	dbEST	Sequence 4541	AW167481	dbEST
Sequence 4490	AL036415	dbEST	Sequence 4542	AW169941	dbEST
Sequence 4491	AL036445	dbEST	Sequence 4543	AW170485	dbEST
Sequence 4492	AL036763	dbEST	Sequence 4544	AW176062	dbEST
Sequence 4493	AL036764	dbEST	Sequence 4545	AW177936	dbEST
Sequence 4494	AL037724	dbEST	Sequence 4546	AW177948	dbEST
Sequence 4495	AL038058	dbEST	Sequence 4547	AW177957	dbEST
Sequence 4496	AL038660	dbEST	Sequence 4548	AW179006	dbEST
Sequence 4497	AL038721	dbEST	Sequence 4549	AW181932	dbEST
Sequence 4498	AL039517	dbEST	Sequence 4550	AW183601	dbEST
Sequence 4499	AL039691	dbEST	Sequence 4551	AW188666	dbEST
Sequence 4500	AL040505	dbEST	Sequence 4552	C02912	dbEST
Sequence 4501	AL040993	dbEST	Sequence 4553	C16620	dbEST
Sequence 4502	AL041470	dbEST	Sequence 4554	C18148	dbEST
Sequence 4503	AL042896	dbEST	Sequence 4555	C18436	dbEST
Sequence 4504	AL043245	dbEST	Sequence 4556	C18570	dbEST
Sequence 4505	AL044016	dbEST	Sequence 4557	D58694	dbEST
Sequence 4506	AL044350	dbEST	Sequence 4558	F01327	dbEST
Sequence 4507	AL045492	dbEST	Sequence 4559	F05894	dbEST
Sequence 4508	AL046107	dbEST	Sequence 4560	F07432	dbEST
Sequence 4509	AL046313	dbEST	Sequence 4561	F19390	dbEST
Sequence 4510	AL047277	dbEST	Sequence 4562	F25339	dbEST
Sequence 4511	AL047334	dbEST	Sequence 4563	F27302	dbEST
Sequence 4512	AL047838	dbEST	Sequence 4564	F27796	dbEST
Sequence 4513	AL048554	dbEST	Sequence 4565	F28190	dbEST
Sequence 4514	AL110463	dbEST	Sequence 4566	F34889	dbEST
Sequence 4515	AL118956	dbEST	Sequence 4567	H00112	dbEST
Sequence 4516	AL120807	dbEST	Sequence 4568	H01419	dbEST
Sequence 4517	AW006392	dbEST	Sequence 4569	H01979	dbEST
Sequence 4518	AW014590	dbEST	Sequence 4570	H02725	dbEST
Sequence 4519	AW016611	dbEST	Sequence 4571	H06040	dbEST
Sequence 4520	AW026543	dbEST	Sequence 4572	H06313	dbEST

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Sequence 4573	H08929	dbEST	Sequence 4625	R70116	dbEST
Sequence 4574	H10932	dbEST	Sequence 4626	R77854	dbEST
Sequence 4575	H12090	dbEST	Sequence 4627	R85291	dbEST
Sequence 4576	H12254	dbEST	Sequence 4628	T30604	dbEST
Sequence 4577	H17195	dbEST	Sequence 4629	T59793	dbEST
Sequence 4578	H19153	dbEST	Sequence 4630	T62753	dbEST
Sequence 4579	H19367	dbEST	Sequence 4631	T65174	dbEST
Sequence 4580	H20888	dbEST	Sequence 4632	T65642	dbEST
Sequence 4581	H23370	dbEST	Sequence 4633	T68057	dbEST
Sequence 4582	H25211	dbEST	Sequence 4634	T71122	dbEST
Sequence 4583	H25825	dbEST	Sequence 4635	T74004	dbEST
Sequence 4584	H26319	dbEST	Sequence 4636	T79957	dbEST
Sequence 4585	H28581	dbEST	Sequence 4637	T81666	dbEST
Sequence 4586	H29149	dbEST	Sequence 4638	T87572	dbEST
Sequence 4587	H29635	dbEST	Sequence 4639	W01739	dbEST
Sequence 4588	H39809	dbEST	Sequence 4640	W02575	dbEST
Sequence 4589	H49903	dbEST	Sequence 4641	W04588	dbEST
Sequence 4590	H54240	dbEST	Sequence 4642	W28466	dbEST
Sequence 4591	H60247	dbEST	Sequence 4643	W31167	dbEST
Sequence 4592	H61232	dbEST	Sequence 4644	W32156	dbEST
Sequence 4593	H70543	dbEST	Sequence 4645	W38407	dbEST
Sequence 4594	H71076	dbEST	Sequence 4646	W38913	dbEST
Sequence 4595	H79973	dbEST	Sequence 4647	W39053	dbEST
Sequence 4596	H83317	dbEST	Sequence 4648	W48827	dbEST
Sequence 4597	H83328	dbEST	Sequence 4649	W72729	dbEST
Sequence 4598	H85200	dbEST	Sequence 4650	W77826	dbEST
Sequence 4599	H87807	dbEST	Sequence 4651	W79340	dbEST
Sequence 4600	H89883	dbEST	Sequence 4652	W80673	dbEST
Sequence 4601	H97090	dbEST	Sequence 4653	W85764	dbEST
Sequence 4602	H99586	dbEST	Sequence 4654	Z33579	dbEST
Sequence 4603	N21201	dbEST	Sequence 4655	N91259	NUCPATENT
Sequence 4604	N24459	dbEST	Sequence 4656	N91825	NUCPATENT
Sequence 4605	N26421	dbEST	Sequence 4657	Q37811	NUCPATENT
Sequence 4606	N28008	dbEST	Sequence 4658	Q65520	NUCPATENT
Sequence 4607	N31801	dbEST	Sequence 4659	Q94780	NUCPATENT
Sequence 4608	N32737	dbEST	Sequence 4660	T02792	NUCPATENT
Sequence 4609	N41418	dbEST	Sequence 4661	T60740	NUCPATENT
Sequence 4610	N42929	dbEST	Sequence 4662	T72175	NUCPATENT
Sequence 4611	N47360	dbEST	Sequence 4663	T79274	NUCPATENT
Sequence 4612	N71080	dbEST	Sequence 4664	T97897	NUCPATENT
Sequence 4613	R11885	dbEST	Sequence 4665	V20443	NUCPATENT
Sequence 4614	R13878	dbEST	Sequence 4666	V29267	NUCPATENT
Sequence 4615	R17110	dbEST	Sequence 4667	V35457	NUCPATENT
Sequence 4616	R18274	dbEST	Sequence 4668	V43612	NUCPATENT
Sequence 4617	R24400	dbEST	Sequence 4669	V57903	NUCPATENT
Sequence 4618	R24834	dbEST	Sequence 4670	V58544	NUCPATENT
Sequence 4619	R34553	dbEST	Sequence 4671	V58619	NUCPATENT
Sequence 4620	R36477	dbEST	Sequence 4672	V59096	NUCPATENT
Sequence 4621	R42994	dbEST	Sequence 4673	V59539	NUCPATENT
Sequence 4622	R54273	dbEST	Sequence 4674	V62427	NUCPATENT
Sequence 4623	R59031	dbEST	Sequence 4675	V64158	NUCPATENT
Sequence 4624	R61601	dbEST	Sequence 4676	V69855	NUCPATENT

[illegible]

Sequence 4677	V7035	NUCPATENT	Sequence 4700	X97790	NUCPATENT
Sequence 4678	V72211	NUCPATENT	Sequence 4701	Z06250	NUCPATENT
Sequence 4679	V81414	NUCPATENT	Sequence 4702	Z15124	NUCPATENT
Sequence 4680	V84510	NUCPATENT	Sequence 4703	Z15132	NUCPATENT
Sequence 4681	V86232	NUCPATENT	Sequence 4704	Z15187	NUCPATENT
Sequence 4682	V89565	NUCPATENT	Sequence 4705	Z15987	NUCPATENT
Sequence 4683	V90009	NUCPATENT	Sequence 4706	Z24892	NUCPATENT
Sequence 4684	X00630	NUCPATENT	Sequence 4707	Z24893	NUCPATENT
Sequence 4685	X03841	NUCPATENT	Sequence 4708	Z27237	NUCPATENT
Sequence 4686	X07429	NUCPATENT	Sequence 4709	Z33949	NUCPATENT
Sequence 4687	X20426	NUCPATENT	Sequence 4710	AC29436	PREPATNUC
Sequence 4688	X20437	NUCPATENT	Sequence 4711	AC31443	PREPATNUC
Sequence 4689	X27262	NUCPATENT	Sequence 4712	AC31770	PREPATNUC
Sequence 4690	X37385	NUCPATENT	Sequence 4713	AC33242	PREPATNUC
Sequence 4691	X37553	NUCPATENT	Sequence 4714	AC33576	PREPATNUC
Sequence 4692	X39825	NUCPATENT	Sequence 4715	AC33673	PREPATNUC
Sequence 4693	X39912	NUCPATENT	Sequence 4716	AC33992	PREPATNUC
Sequence 4694	X52268	NUCPATENT	Sequence 4717	AC34287	PREPATNUC
Sequence 4695	X56415	NUCPATENT	Sequence 4718	AC34371	PREPATNUC
Sequence 4696	X59352	NUCPATENT	Sequence 4719	AC34444	PREPATNUC
Sequence 4697	X80676	NUCPATENT	Sequence 4720	AC34517	PREPATNUC
Sequence 4698	X87397	NUCPATENT	Sequence 4721	AC34738	PREPATNUC
Sequence 4699	X97772	NUCPATENT	Sequence 4722	AC34865	PREPATNUC
Sequence 4700	X97790	NUCPATENT	Sequence 4723	AC35363	PREPATNUC
Sequence 4701	Z06250	NUCPATENT			
Sequence 4702	Z15124	NUCPATENT			
Sequence 4703	Z15132	NUCPATENT			
Sequence 4704	Z15187	NUCPATENT			
Sequence 4705	Z15987	NUCPATENT			
Sequence 4706	Z24892	NUCPATENT			
Sequence 4707	Z24893	NUCPATENT			
Sequence 4708	Z27237	NUCPATENT			
Sequence 4709	Z33949	NUCPATENT			
Sequence 4710	AC29436	PREPATNUC			
Sequence 4711	AC31443	PREPATNUC			
Sequence 4712	AC31770	PREPATNUC			
Sequence 4713	AC33242	PREPATNUC			
Sequence 4714	AC33576	PREPATNUC			
Sequence 4715	AC33673	PREPATNUC			
Sequence 4716	AC33992	PREPATNUC			
Sequence 4717	AC34287	PREPATNUC			
Sequence 4718	AC34371	PREPATNUC			
Sequence 4719	AC34444	PREPATNUC			
Sequence 4720	AC34517	PREPATNUC			
Sequence 4721	AC34738	PREPATNUC			
Sequence 4722	AC34865	PREPATNUC			
Sequence 4723	AC35363	PREPATNUC			
Sequence #	Accession #	Database	Sequence 4724	AF002346	GENBANK
Sequence 4724	A06846	GENBANK	Sequence 4725	AB002353	GENBANK
Sequence 4725	A17546	GENBANK	Sequence 4726	AB002375	GENBANK
			Sequence 4727	AB002380	GENBANK
			Sequence 4728	AB002386	GENBANK
			Sequence 4729	AB007929	GENBANK
			Sequence 4730	AB007932	GENBANK
			Sequence 4731	AB007956	GENBANK
			Sequence 4732	AB011120	GENBANK
			Sequence 4733	AB011147	GENBANK
			Sequence 4734	AB014888	GENBANK
			Sequence 4735	AB016533	GENBANK
			Sequence 4736	AB017430	GENBANK
			Sequence 4737	AB017971	GENBANK
			Sequence 4738	AB018284	GENBANK
			Sequence 4739	AB018313	GENBANK
			Sequence 4740	AB019392	GENBANK
			Sequence 4741	AB019568	GENBANK
			Sequence 4742	AB020665	GENBANK
			Sequence 4743	AB020679	GENBANK
			Sequence 4744	AB023145	GENBANK
			Sequence 4745	AB023177	GENBANK
			Sequence 4746	AB023201	GENBANK
			Sequence 4747	AB027466	GENBANK
			Sequence 4748	AB028624	GENBANK
			Sequence 4749	AB028945	GENBANK
			Sequence 4750	AB029290	GENBANK
			Sequence 4751	AB032951	GENBANK
			Sequence 4752	AB033033	GENBANK
			Sequence 4753	AB033076	GENBANK
			Sequence 4754	AB033080	GENBANK
			Sequence 4755	AD001528	GENBANK
			Sequence 4756	AF001893	GENBANK
			Sequence 4757	AF002210	GENBANK
			Sequence 4758	AF004813	GENBANK
			Sequence 4759	AF006043	GENBANK
			Sequence 4760	AF007217	GENBANK
			Sequence 4761	AF009615	GENBANK
			Sequence 4762	AF010233	GENBANK
			Sequence 4763	AF010315	GENBANK
			Sequence 4764	AF012872	GENBANK
			Sequence 4765	AF013160	GENBANK
			Sequence 4766	AF015283	GENBANK
			Sequence 4767	AF017256	GENBANK
			Sequence 4768	AF020202	GENBANK
			Sequence 4769	AF021351	GENBANK
			Sequence 4770	AF028832	GENBANK
			Sequence 4771	AF035295	GENBANK
			Sequence 4772	AF035812	GENBANK
			Sequence 4773	AF038404	GENBANK
			Sequence 4774	AF041483	GENBANK
			Sequence 4775	AF045167	GENBANK
			Sequence 4776		
			Sequence 4777		

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Sequence 4778	AF047593	GENBANK	Sequence 4830	AJ243310	GENBANK
Sequence 4779	AF052187	GENBANK	Sequence 4831	AL049471	GENBANK
Sequence 4780	AF054990	GENBANK	Sequence 4832	AL050035	GENBANK
Sequence 4781	AF060515	GENBANK	Sequence 4833	AL050037	GENBANK
Sequence 4782	AF061258	GENBANK	Sequence 4834	AL080135	GENBANK
Sequence 4783	AF064769	GENBANK	Sequence 4835	AL110273	GENBANK
Sequence 4784	AF070523	GENBANK	Sequence 4836	AL117471	GENBANK
Sequence 4785	AF070561	GENBANK	Sequence 4837	D10040	GENBANK
Sequence 4786	AF070651	GENBANK	Sequence 4838	D13866	GENBANK
Sequence 4787	AF070657	GENBANK	Sequence 4839	D14662	GENBANK
Sequence 4788	AF070665	GENBANK	Sequence 4840	D16937	GENBANK
Sequence 4789	AF071202	GENBANK	Sequence 4841	D17260	GENBANK
Sequence 4790	AF074016	GENBANK	Sequence 4842	D17409	GENBANK
Sequence 4791	AF077030	GENBANK	Sequence 4843	D28118	GENBANK
Sequence 4792	AF078858	GENBANK	Sequence 4844	D29012	GENBANK
Sequence 4793	AF083107	GENBANK	Sequence 4845	D31763	GENBANK
Sequence 4794	AF084555	GENBANK	Sequence 4846	D38549	GENBANK
Sequence 4795	AF085243	GENBANK	Sequence 4847	D45370	GENBANK
Sequence 4796	AF085858	GENBANK	Sequence 4848	D49489	GENBANK
Sequence 4797	AF089747	GENBANK	Sequence 4849	D50371	GENBANK
Sequence 4798	AF091083	GENBANK	Sequence 4850	D63476	GENBANK
Sequence 4799	AF092038	GENBANK	Sequence 4851	D63875	GENBANK
Sequence 4800	AF104252	GENBANK	Sequence 4852	D87292	GENBANK
Sequence 4801	AF114816	GENBANK	Sequence 4853	D87438	GENBANK
Sequence 4802	AF124440	GENBANK	Sequence 4854	D87666	GENBANK
Sequence 4803	AF131775	GENBANK	Sequence 4855	D89675	GENBANK
Sequence 4804	AF131802	GENBANK	Sequence 4856	D90373	GENBANK
Sequence 4805	AF132956	GENBANK	Sequence 4857	D90427	GENBANK
Sequence 4806	AF136450	GENBANK	Sequence 4858	D90452	GENBANK
Sequence 4807	AF145316	GENBANK	Sequence 4859	E02628	GENBANK
Sequence 4808	AF147331	GENBANK	Sequence 4860	E06721	GENBANK
Sequence 4809	AF151840	GENBANK	Sequence 4861	J02642	GENBANK
Sequence 4810	AF151844	GENBANK	Sequence 4862	J03802	GENBANK
Sequence 4811	AF151870	GENBANK	Sequence 4863	J04183	GENBANK
Sequence 4812	AF151902	GENBANK	Sequence 4864	J04759	GENBANK
Sequence 4813	AF151906	GENBANK	Sequence 4865	K01911	GENBANK
Sequence 4814	AF157028	GENBANK	Sequence 4866	L05091	GENBANK
Sequence 4815	AF159056	GENBANK	Sequence 4867	L05092	GENBANK
Sequence 4816	AF159295	GENBANK	Sequence 4868	L05093	GENBANK
Sequence 4817	AF168956	GENBANK	Sequence 4869	L08044	GENBANK
Sequence 4818	AF176555	GENBANK	Sequence 4870	L08441	GENBANK
Sequence 4819	AF176642	GENBANK	Sequence 4871	L10376	GENBANK
Sequence 4820	AF182289	GENBANK	Sequence 4872	L10678	GENBANK
Sequence 4821	AF188745	GENBANK	Sequence 4873	L15203	GENBANK
Sequence 4822	AF188746	GENBANK	Sequence 4874	L15702	GENBANK
Sequence 4823	AF191020	GENBANK	Sequence 4875	L19597	GENBANK
Sequence 4824	AF191339	GENBANK	Sequence 4876	L20431	GENBANK
Sequence 4825	AJ005259	GENBANK	Sequence 4877	L22009	GENBANK
Sequence 4826	AJ006470	GENBANK	Sequence 4878	L25081	GENBANK
Sequence 4827	AJ010482	GENBANK	Sequence 4879	L38951	GENBANK
Sequence 4828	AJ132583	GENBANK	Sequence 4880	M10119	GENBANK
Sequence 4829	AJ224172	GENBANK	Sequence 4881	M10906	GENBANK



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Sequence 4882	M1156	GENBANK	Sequence 4924	U67171	GENBANK
Sequence 4883	M12125	GENBANK	Sequence 4935	U70063	GENBANK
Sequence 4884	M12623	GENBANK	Sequence 4936	U79254	GENBANK
Sequence 4885	M13692	GENBANK	Sequence 4937	U79457	GENBANK
Sequence 4886	M15395	GENBANK	Sequence 4938	U82226	GENBANK
Sequence 4887	M15885	GENBANK	Sequence 4939	U82256	GENBANK
Sequence 4888	M16247	GENBANK	Sequence 4940	U94586	GENBANK
Sequence 4889	M17885	GENBANK	Sequence 4941	X01037	GENBANK
Sequence 4890	M17886	GENBANK	Sequence 4942	X01630	GENBANK
Sequence 4891	M21895	GENBANK	Sequence 4943	X04098	GENBANK
Sequence 4892	M22538	GENBANK	Sequence 4944	X04106	GENBANK
Sequence 4893	M22918	GENBANK	Sequence 4945	X04408	GENBANK
Sequence 4894	M26325	GENBANK	Sequence 4946	X04526	GENBANK
Sequence 4895	M26663	GENBANK	Sequence 4947	X13839	GENBANK
Sequence 4896	M26880	GENBANK	Sequence 4948	X15729	GENBANK
Sequence 4897	M29064	GENBANK	Sequence 4949	X57352	GENBANK
Sequence 4898	M33308	GENBANK	Sequence 4950	X58141	GENBANK
Sequence 4899	M34840	GENBANK	Sequence 4951	X60036	GENBANK
Sequence 4900	M36647	GENBANK	Sequence 4952	X63380	GENBANK
Sequence 4901	M60255	GENBANK	Sequence 4953	X63422	GENBANK
Sequence 4902	M61832	GENBANK	Sequence 4954	X63564	GENBANK
Sequence 4903	M64098	GENBANK	Sequence 4955	X68277	GENBANK
Sequence 4904	M64241	GENBANK	Sequence 4956	X69711	GENBANK
Sequence 4905	M64571	GENBANK	Sequence 4957	X73874	GENBANK
Sequence 4906	M68840	GENBANK	Sequence 4958	X76302	GENBANK
Sequence 4907	M81757	GENBANK	Sequence 4959	X76732	GENBANK
Sequence 4908	M94345	GENBANK	Sequence 4960	X81889	GENBANK
Sequence 4909	S50015	GENBANK	Sequence 4961	X84908	GENBANK
Sequence 4910	S73591	GENBANK	Sequence 4962	Y00815	GENBANK
Sequence 4911	S74678	GENBANK	Sequence 4963	Y10351	GENBANK
Sequence 4912	S75755	GENBANK	Sequence 4964	AA010986	dbEST
Sequence 4913	U02570	GENBANK	Sequence 4965	AA011203	dbEST
Sequence 4914	U02619	GENBANK	Sequence 4966	AA026630	dbEST
Sequence 4915	U07643	GENBANK	Sequence 4967	AA029143	dbEST
Sequence 4916	U10248	GENBANK	Sequence 4968	AA033869	dbEST
Sequence 4917	U10439	GENBANK	Sequence 4969	AA034436	dbEST
Sequence 4918	U14968	GENBANK	Sequence 4970	AA037190	dbEST
Sequence 4919	U14970	GENBANK	Sequence 4971	AA040127	dbEST
Sequence 4920	U15174	GENBANK	Sequence 4972	AA043951	dbEST
Sequence 4921	U16738	GENBANK	Sequence 4973	AA044659	dbEST
Sequence 4922	U18197	GENBANK	Sequence 4974	AA056603	dbEST
Sequence 4923	U21049	GENBANK	Sequence 4975	AA057095	dbEST
Sequence 4924	U22233	GENBANK	Sequence 4976	AA063476	dbEST
Sequence 4925	U25766	GENBANK	Sequence 4977	AA064886	dbEST
Sequence 4926	U34038	GENBANK	Sequence 4978	AA071511	dbEST
Sequence 4927	U36336	GENBANK	Sequence 4979	AA080889	dbEST
Sequence 4928	U40272	GENBANK	Sequence 4980	AA099520	dbEST
Sequence 4929	U42068	GENBANK	Sequence 4981	AA099631	dbEST
Sequence 4930	U49957	GENBANK	Sequence 4982	AA101270	dbEST
Sequence 4931	U50733	GENBANK	Sequence 4983	AA101674	dbEST
Sequence 4932	U52962	GENBANK	Sequence 4984	AA127185	dbEST
Sequence 4933	U52969	GENBANK	Sequence 4985	AA132342	dbEST

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Sequence 4986	AA1337	dbEST	Sequence 5038	AA340719	dbEST
Sequence 4987	AA150891	dbEST	Sequence 5039	AA342969	dbEST
Sequence 4988	AA172239	dbEST	Sequence 5040	AA344067	dbEST
Sequence 4989	AA173348	dbEST	Sequence 5041	AA346600	dbEST
Sequence 4990	AA173948	dbEST	Sequence 5042	AA354527	dbEST
Sequence 4991	AA178907	dbEST	Sequence 5043	AA359763	dbEST
Sequence 4992	AA179409	dbEST	Sequence 5044	AA364498	dbEST
Sequence 4993	AA190890	dbEST	Sequence 5045	AA364667	dbEST
Sequence 4994	AA191092	dbEST	Sequence 5046	AA366518	dbEST
Sequence 4995	AA191476	dbEST	Sequence 5047	AA371017	dbEST
Sequence 4996	AA195734	dbEST	Sequence 5048	AA371205	dbEST
Sequence 4997	AA224751	dbEST	Sequence 5049	AA377218	dbEST
Sequence 4998	AA225488	dbEST	Sequence 5050	AA384125	dbEST
Sequence 4999	AA225517	dbEST	Sequence 5051	AA400213	dbEST
Sequence 5000	AA226735	dbEST	Sequence 5052	AA426235	dbEST
Sequence 5001	AA228953	dbEST	Sequence 5053	AA430597	dbEST
Sequence 5002	AA229225	dbEST	Sequence 5054	AA442615	dbEST
Sequence 5003	AA251182	dbEST	Sequence 5055	AA443184	dbEST
Sequence 5004	AA256401	dbEST	Sequence 5056	AA443463	dbEST
Sequence 5005	AA258916	dbEST	Sequence 5057	AA446877	dbEST
Sequence 5006	AA259025	dbEST	Sequence 5058	AA447700	dbEST
Sequence 5007	AA279054	dbEST	Sequence 5059	AA448617	dbEST
Sequence 5008	AA292866	dbEST	Sequence 5060	AA451733	dbEST
Sequence 5009	AA293885	dbEST	Sequence 5061	AA451988	dbEST
Sequence 5010	AA296534	dbEST	Sequence 5062	AA454962	dbEST
Sequence 5011	AA296690	dbEST	Sequence 5063	AA470833	dbEST
Sequence 5012	AA296846	dbEST	Sequence 5064	AA476509	dbEST
Sequence 5013	AA297270	dbEST	Sequence 5065	AA483887	dbEST
Sequence 5014	AA298593	dbEST	Sequence 5066	AA484751	dbEST
Sequence 5015	AA299209	dbEST	Sequence 5067	AA485767	dbEST
Sequence 5016	AA300065	dbEST	Sequence 5068	AA486551	dbEST
Sequence 5017	AA301096	dbEST	Sequence 5069	AA487556	dbEST
Sequence 5018	AA301666	dbEST	Sequence 5070	AA488567	dbEST
Sequence 5019	AA302919	dbEST	Sequence 5071	AA489498	dbEST
Sequence 5020	AA303594	dbEST	Sequence 5072	AA490893	dbEST
Sequence 5021	AA305409	dbEST	Sequence 5073	AA503943	dbEST
Sequence 5022	AA306378	dbEST	Sequence 5074	AA507306	dbEST
Sequence 5023	AA310441	dbEST	Sequence 5075	AA507878	dbEST
Sequence 5024	AA310561	dbEST	Sequence 5076	AA508861	dbEST
Sequence 5025	AA312444	dbEST	Sequence 5077	AA523982	dbEST
Sequence 5026	AA313200	dbEST	Sequence 5078	AA528123	dbEST
Sequence 5027	AA313708	dbEST	Sequence 5079	AA533716	dbEST
Sequence 5028	AA314188	dbEST	Sequence 5080	AA534419	dbEST
Sequence 5029	AA314757	dbEST	Sequence 5081	AA535185	dbEST
Sequence 5030	AA316199	dbEST	Sequence 5082	AA535695	dbEST
Sequence 5031	AA318544	dbEST	Sequence 5083	AA541677	dbEST
Sequence 5032	AA320701	dbEST	Sequence 5084	AA548238	dbEST
Sequence 5033	AA324251	dbEST	Sequence 5085	AA554735	dbEST
Sequence 5034	AA325214	dbEST	Sequence 5086	AA570748	dbEST
Sequence 5035	AA327546	dbEST	Sequence 5087	AA573559	dbEST
Sequence 5036	AA333526	dbEST	Sequence 5088	AA573811	dbEST
Sequence 5037	AA339065	dbEST	Sequence 5089	AA578265	dbEST

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Sequence 5090	AA5794	dbEST	Sequence 5141	AI267282	dbEST
Sequence 5091	AA579998	dbEST	Sequence 5142	AI267502	dbEST
Sequence 5092	AA588828	dbEST	Sequence 5143	AI268362	dbEST
Sequence 5093	AA599229	dbEST	Sequence 5144	AI275114	dbEST
Sequence 5094	AA601289	dbEST	Sequence 5145	AI277434	dbEST
Sequence 5095	AA633347	dbEST	Sequence 5146	AI281946	dbEST
Sequence 5096	AA633399	dbEST	Sequence 5147	AI284667	dbEST
Sequence 5097	AA634196	dbEST	Sequence 5148	AI288388	dbEST
Sequence 5098	AA669823	dbEST	Sequence 5149	AI289278	dbEST
Sequence 5099	AA703004	dbEST	Sequence 5150	AI307634	dbEST
Sequence 5100	AA740574	dbEST	Sequence 5151	AI310235	dbEST
Sequence 5101	AA743621	dbEST	Sequence 5152	AI360451	dbEST
Sequence 5102	AA775824	dbEST	Sequence 5153	AI368664	dbEST
Sequence 5103	AA804375	dbEST	Sequence 5154	AI373544	dbEST
Sequence 5104	AA810340	dbEST	Sequence 5155	AI375919	dbEST
Sequence 5105	AA826244	dbEST	Sequence 5156	AI457216	dbEST
Sequence 5106	AA862855	dbEST	Sequence 5157	AI459667	dbEST
Sequence 5107	AA906582	dbEST	Sequence 5158	AI473779	dbEST
Sequence 5108	AA908797	dbEST	Sequence 5159	AI525843	dbEST
Sequence 5109	AA934755	dbEST	Sequence 5160	AI536685	dbEST
Sequence 5110	AA974402	dbEST	Sequence 5161	AI547284	dbEST
Sequence 5111	AA984460	dbEST	Sequence 5162	AI557458	dbEST
Sequence 5112	AA988102	dbEST	Sequence 5163	AI570141	dbEST
Sequence 5113	AA992672	dbEST	Sequence 5164	AI587642	dbEST
Sequence 5114	AI041150	dbEST	Sequence 5165	AI632523	dbEST
Sequence 5115	AI042406	dbEST	Sequence 5166	AI640588	dbEST
Sequence 5116	AI057617	dbEST	Sequence 5167	AI651069	dbEST
Sequence 5117	AI065152	dbEST	Sequence 5168	AI660243	dbEST
Sequence 5118	AI074232	dbEST	Sequence 5169	AI677810	dbEST
Sequence 5119	AI081133	dbEST	Sequence 5170	AI685632	dbEST
Sequence 5120	AI096706	dbEST	Sequence 5171	AI686957	dbEST
Sequence 5121	AI110765	dbEST	Sequence 5172	AI694572	dbEST
Sequence 5122	AI125166	dbEST	Sequence 5173	AI708884	dbEST
Sequence 5123	AI126653	dbEST	Sequence 5174	AI708995	dbEST
Sequence 5124	AI128091	dbEST	Sequence 5175	AI749547	dbEST
Sequence 5125	AI133668	dbEST	Sequence 5176	AI749886	dbEST
Sequence 5126	AI140793	dbEST	Sequence 5177	AI815664	dbEST
Sequence 5127	AI143746	dbEST	Sequence 5178	AI815966	dbEST
Sequence 5128	AI144423	dbEST	Sequence 5179	AI860016	dbEST
Sequence 5129	AI186597	dbEST	Sequence 5180	AI878918	dbEST
Sequence 5130	AI188794	dbEST	Sequence 5181	AI885174	dbEST
Sequence 5131	AI189345	dbEST	Sequence 5182	AI888493	dbEST
Sequence 5132	AI198311	dbEST	Sequence 5183	AI929664	dbEST
Sequence 5133	AI199681	dbEST	Sequence 5184	AI936472	dbEST
Sequence 5134	AI214048	dbEST	Sequence 5185	AI955087	dbEST
Sequence 5135	AI216969	dbEST	Sequence 5186	AI991469	dbEST
Sequence 5136	AI243841	dbEST	Sequence 5187	AL035985	dbEST
Sequence 5137	AI246497	dbEST	Sequence 5188	AL037724	dbEST
Sequence 5138	AI253395	dbEST	Sequence 5189	AL042536	dbEST
Sequence 5139	AI267158	dbEST	Sequence 5190	AW003287	dbEST
Sequence 5140	AI267216	dbEST	Sequence 5191	AW024797	dbEST
Sequence 5141	AI267282	dbEST	Sequence 5192	AW071906	dbEST
			Sequence 5193	AW130325	dbEST

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Sequence 5194	AW152104	dbEST	Sequence 5245	Z17710	NUCPATENT
Sequence 5195	AW177929	dbEST	Sequence 5246	Z33671	NUCPATENT
Sequence 5196	AW177931	dbEST			
Sequence 5197	C05816	dbEST	Sequence #	Accession	Database
Sequence 5198	C18484	dbEST		#	
Sequence 5199	D58694	dbEST	Sequence 5248	A06846	GENBANK
Sequence 5200	F24428	dbEST	Sequence 5249	A06919	GENBANK
Sequence 5201	F27796	dbEST	Sequence 5250	A06925	GENBANK
Sequence 5202	H00112	dbEST	Sequence 5251	A21185	GENBANK
Sequence 5203	H08924	dbEST	Sequence 5252	A23013	GENBANK
Sequence 5204	H18732	dbEST	Sequence 5253	AB000220	GENBANK
Sequence 5205	H58534	dbEST	Sequence 5254	AB000584	GENBANK
Sequence 5206	M85357	dbEST	Sequence 5255	AB002312	GENBANK
Sequence 5207	N40017	dbEST	Sequence 5256	AB002350	GENBANK
Sequence 5208	N86292	dbEST	Sequence 5257	AB002382	GENBANK
Sequence 5209	R70270	dbEST	Sequence 5258	AB002806	GENBANK
Sequence 5210	R99478	dbEST	Sequence 5259	AB004851	GENBANK
Sequence 5211	W00471	dbEST	Sequence 5260	AB005535	GENBANK
Sequence 5212	W04380	dbEST	Sequence 5261	AB006534	GENBANK
Sequence 5213	W07165	dbEST	Sequence 5262	AB006621	GENBANK
Sequence 5214	W37945	dbEST	Sequence 5263	AB007867	GENBANK
Sequence 5215	W73588	dbEST	Sequence 5264	AB007882	GENBANK
Sequence 5216	W78967	dbEST	Sequence 5265	AB007892	GENBANK
Sequence 5217	W85764	dbEST	Sequence 5266	AB007931	GENBANK
Sequence 5218	N60172	NUCPATENT	Sequence 5267	AB007947	GENBANK
Sequence 5219	N91825	NUCPATENT	Sequence 5268	AB008226	GENBANK
Sequence 5220	Q43526	NUCPATENT	Sequence 5269	AB011164	GENBANK
Sequence 5221	Q66256	NUCPATENT	Sequence 5270	AB014511	GENBANK
Sequence 5222	Q74061	NUCPATENT	Sequence 5271	AB014542	GENBANK
Sequence 5223	T00880	NUCPATENT	Sequence 5272	AB014552	GENBANK
Sequence 5224	T04864	NUCPATENT	Sequence 5273	AB018274	GENBANK
Sequence 5225	T36781	NUCPATENT	Sequence 5274	AB018284	GENBANK
Sequence 5226	T59998	NUCPATENT	Sequence 5275	AB018301	GENBANK
Sequence 5227	T89060	NUCPATENT	Sequence 5276	AB018315	GENBANK
Sequence 5228	T91054	NUCPATENT	Sequence 5277	AB018319	GENBANK
Sequence 5229	V07571	NUCPATENT	Sequence 5278	AB018340	GENBANK
Sequence 5230	V34212	NUCPATENT	Sequence 5279	AB018352	GENBANK
Sequence 5231	V45442	NUCPATENT	Sequence 5280	AB019568	GENBANK
Sequence 5232	V64828	NUCPATENT	Sequence 5281	AB019691	GENBANK
Sequence 5233	V69855	NUCPATENT	Sequence 5282	AB020637	GENBANK
Sequence 5234	V71075	NUCPATENT	Sequence 5283	AB020652	GENBANK
Sequence 5235	V71742	NUCPATENT	Sequence 5284	AB020692	GENBANK
Sequence 5236	V74071	NUCPATENT	Sequence 5285	AB020698	GENBANK
Sequence 5237	V84395	NUCPATENT	Sequence 5286	AB021288	GENBANK
Sequence 5238	V86225	NUCPATENT	Sequence 5287	AB023150	GENBANK
Sequence 5239	V86232	NUCPATENT	Sequence 5288	AB023153	GENBANK
Sequence 5240	X04125	NUCPATENT	Sequence 5289	AB027466	GENBANK
Sequence 5241	X87624	NUCPATENT	Sequence 5290	AB028964	GENBANK
Sequence 5242	X98561	NUCPATENT	Sequence 5291	AB028971	GENBANK
Sequence 5243	X99098	NUCPATENT	Sequence 5292	AB029000	GENBANK
Sequence 5244	Z06250	NUCPATENT	Sequence 5293	AB029027	GENBANK
Sequence 5245	Z11491	NUCPATENT	Sequence 5294	AB032957	GENBANK

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Sequence 5295	AB033016	GENBANK	Sequence 5347	AF062318	GENBANK
Sequence 5296	AB033017	GENBANK	Sequence 5348	AF064491	GENBANK
Sequence 5297	AB033070	GENBANK	Sequence 5349	AF064819	GENBANK
Sequence 5298	AB033074	GENBANK	Sequence 5350	AF065388	GENBANK
Sequence 5299	AF007791	GENBANK	Sequence 5351	AF068754	GENBANK
Sequence 5300	AF008443	GENBANK	Sequence 5352	AF069073	GENBANK
Sequence 5301	AF013759	GENBANK	Sequence 5353	AF069601	GENBANK
Sequence 5302	AF015283	GENBANK	Sequence 5354	AF070523	GENBANK
Sequence 5303	AF017305	GENBANK	Sequence 5355	AF070548	GENBANK
Sequence 5304	AF017445	GENBANK	Sequence 5356	AF070553	GENBANK
Sequence 5305	AF019226	GENBANK	Sequence 5357	AF070554	GENBANK
Sequence 5306	AF020038	GENBANK	Sequence 5358	AF070562	GENBANK
Sequence 5307	AF020591	GENBANK	Sequence 5359	AF070596	GENBANK
Sequence 5308	AF020768	GENBANK	Sequence 5360	AF070652	GENBANK
Sequence 5309	AF021336	GENBANK	Sequence 5361	AF071202	GENBANK
Sequence 5310	AF023676	GENBANK	Sequence 5362	AF072371	GENBANK
Sequence 5311	AF025998	GENBANK	Sequence 5363	AF077030	GENBANK
Sequence 5312	AF026292	GENBANK	Sequence 5364	AF077037	GENBANK
Sequence 5313	AF027302	GENBANK	Sequence 5365	AF077202	GENBANK
Sequence 5314	AF034209	GENBANK	Sequence 5366	AF078854	GENBANK
Sequence 5315	AF034795	GENBANK	Sequence 5367	AF078858	GENBANK
Sequence 5316	AF038172	GENBANK	Sequence 5368	AF078863	GENBANK
Sequence 5317	AF038175	GENBANK	Sequence 5369	AF082858	GENBANK
Sequence 5318	AF038404	GENBANK	Sequence 5370	AF082889	GENBANK
Sequence 5319	AF038451	GENBANK	Sequence 5371	AF083190	GENBANK
Sequence 5320	AF038962	GENBANK	Sequence 5372	AF086168	GENBANK
Sequence 5321	AF039081	GENBANK	Sequence 5373	AF086245	GENBANK
Sequence 5322	AF039918	GENBANK	Sequence 5374	AF086336	GENBANK
Sequence 5323	AF040250	GENBANK	Sequence 5375	AF087020	GENBANK
Sequence 5324	AF040958	GENBANK	Sequence 5376	AF089747	GENBANK
Sequence 5325	AF042166	GENBANK	Sequence 5377	AF091084	GENBANK
Sequence 5326	AF042284	GENBANK	Sequence 5378	AF092135	GENBANK
Sequence 5327	AF042384	GENBANK	Sequence 5379	AF096773	GENBANK
Sequence 5328	AF045583	GENBANK	Sequence 5380	AF096774	GENBANK
Sequence 5329	AF047020	GENBANK	Sequence 5381	AF097514	GENBANK
Sequence 5330	AF047185	GENBANK	Sequence 5382	AF099149	GENBANK
Sequence 5331	AF047436	GENBANK	Sequence 5383	AF100741	GENBANK
Sequence 5332	AF048731	GENBANK	Sequence 5384	AF100756	GENBANK
Sequence 5333	AF050641	GENBANK	Sequence 5385	AF102846	GENBANK
Sequence 5334	AF051321	GENBANK	Sequence 5386	AF103907	GENBANK
Sequence 5335	AF052093	GENBANK	Sequence 5387	AF112227	GENBANK
Sequence 5336	AF052149	GENBANK	Sequence 5388	AF126181	GENBANK
Sequence 5337	AF052175	GENBANK	Sequence 5389	AF128528	GENBANK
Sequence 5338	AF053070	GENBANK	Sequence 5390	AF131220	GENBANK
Sequence 5339	AF054175	GENBANK	Sequence 5391	AF132940	GENBANK
Sequence 5340	AF054181	GENBANK	Sequence 5392	AF138300	GENBANK
Sequence 5341	AF054838	GENBANK	Sequence 5393	AF147331	GENBANK
Sequence 5342	AF054988	GENBANK	Sequence 5394	AF147334	GENBANK
Sequence 5343	AF057706	GENBANK	Sequence 5395	AF149045	GENBANK
Sequence 5344	AF058718	GENBANK	Sequence 5396	AF151105	GENBANK
Sequence 5345	AF060219	GENBANK	Sequence 5397	AF151800	GENBANK
Sequence 5346	AF061258	GENBANK	Sequence 5398	AF151840	GENBANK

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Sequence 5399	AF151846	GENBANK	Sequence 5451	D28482	GENBANK
Sequence 5400	AF151861	GENBANK	Sequence 5452	D29640	GENBANK
Sequence 5401	AF151868	GENBANK	Sequence 5453	D29954	GENBANK
Sequence 5402	AF151884	GENBANK	Sequence 5454	D31886	GENBANK
Sequence 5403	AF151893	GENBANK	Sequence 5455	D38037	GENBANK
Sequence 5404	AF159056	GENBANK	Sequence 5456	D38549	GENBANK
Sequence 5405	AF159092	GENBANK	Sequence 5457	D42039	GENBANK
Sequence 5406	AF159295	GENBANK	Sequence 5458	D42044	GENBANK
Sequence 5407	AF168956	GENBANK	Sequence 5459	D42047	GENBANK
Sequence 5408	AF177291	GENBANK	Sequence 5460	D42138	GENBANK
Sequence 5409	AF177775	GENBANK	Sequence 5461	D43950	GENBANK
Sequence 5410	AF188298	GENBANK	Sequence 5462	D49372	GENBANK
Sequence 5411	AF188745	GENBANK	Sequence 5463	D49489	GENBANK
Sequence 5412	AF188746	GENBANK	Sequence 5464	D50369	GENBANK
Sequence 5413	AF190167	GENBANK	Sequence 5465	D50371	GENBANK
Sequence 5414	AJ010046	GENBANK	Sequence 5466	D50579	GENBANK
Sequence 5415	AJ010482	GENBANK	Sequence 5467	D50916	GENBANK
Sequence 5416	AJ012463	GENBANK	Sequence 5468	D50919	GENBANK
Sequence 5417	AJ012499	GENBANK	Sequence 5469	D55653	GENBANK
Sequence 5418	AJ130733	GENBANK	Sequence 5470	D63486	GENBANK
Sequence 5419	AJ223075	GENBANK	Sequence 5471	D64110	GENBANK
Sequence 5420	AJ223350	GENBANK	Sequence 5472	D80009	GENBANK
Sequence 5421	AJ224172	GENBANK	Sequence 5473	D82060	GENBANK
Sequence 5422	AJ249731	GENBANK	Sequence 5474	D83032	GENBANK
Sequence 5423	AL049705	GENBANK	Sequence 5475	D83735	GENBANK
Sequence 5424	AL049969	GENBANK	Sequence 5476	D85181	GENBANK
Sequence 5425	AL050198	GENBANK	Sequence 5477	D86984	GENBANK
Sequence 5426	AL050274	GENBANK	Sequence 5478	D87127	GENBANK
Sequence 5427	AL080089	GENBANK	Sequence 5479	D87292	GENBANK
Sequence 5428	AL080135	GENBANK	Sequence 5480	D87453	GENBANK
Sequence 5429	AL080209	GENBANK	Sequence 5481	D87462	GENBANK
Sequence 5430	AL096880	GENBANK	Sequence 5482	D87666	GENBANK
Sequence 5431	AL109672	GENBANK	Sequence 5483	D87684	GENBANK
Sequence 5432	AL110183	GENBANK	Sequence 5484	D87735	GENBANK
Sequence 5433	AL117413	GENBANK	Sequence 5485	D87969	GENBANK
Sequence 5434	AL117550	GENBANK	Sequence 5486	D88674	GENBANK
Sequence 5435	AL117595	GENBANK	Sequence 5487	D90373	GENBANK
Sequence 5436	AL121733	GENBANK	Sequence 5488	D90427	GENBANK
Sequence 5437	D00422	GENBANK	Sequence 5489	E01650	GENBANK
Sequence 5438	D13641	GENBANK	Sequence 5490	E01915	GENBANK
Sequence 5439	D13866	GENBANK	Sequence 5491	E02628	GENBANK
Sequence 5440	D13900	GENBANK	Sequence 5492	E03413	GENBANK
Sequence 5441	D14662	GENBANK	Sequence 5493	E06721	GENBANK
Sequence 5442	D14664	GENBANK	Sequence 5494	J00194	GENBANK
Sequence 5443	D16111	GENBANK	Sequence 5495	J02642	GENBANK
Sequence 5444	D16922	GENBANK	Sequence 5496	J02876	GENBANK
Sequence 5445	D17409	GENBANK	Sequence 5497	J02908	GENBANK
Sequence 5446	D17554	GENBANK	Sequence 5498	J03007	GENBANK
Sequence 5447	D21243	GENBANK	Sequence 5499	J03015	GENBANK
Sequence 5448	D21851	GENBANK	Sequence 5500	J03171	GENBANK
Sequence 5449	D21853	GENBANK	Sequence 5501	J03248	GENBANK
Sequence 5450	D26068	GENBANK	Sequence 5502	J03507	GENBANK

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# Table 3-1

Sequence 5503	J03592	GENBANK	Sequence 5585	M26663	GENBANK
Sequence 5504	J03799	GENBANK	Sequence 5556	M27110	GENBANK
Sequence 5505	J03870	GENBANK	Sequence 5557	M28016	GENBANK
Sequence 5506	J05633	GENBANK	Sequence 5558	M28211	GENBANK
Sequence 5507	K00409	GENBANK	Sequence 5559	M29366	GENBANK
Sequence 5508	K01911	GENBANK	Sequence 5560	M29872	GENBANK
Sequence 5509	L05092	GENBANK	Sequence 5561	M31212	GENBANK
Sequence 5510	L05093	GENBANK	Sequence 5562	M31606	GENBANK
Sequence 5511	L05779	GENBANK	Sequence 5563	M33146	GENBANK
Sequence 5512	L07033	GENBANK	Sequence 5564	M33308	GENBANK
Sequence 5513	L07517	GENBANK	Sequence 5565	M34840	GENBANK
Sequence 5514	L08044	GENBANK	Sequence 5566	M36634	GENBANK
Sequence 5515	L12136	GENBANK	Sequence 5567	M57399	GENBANK
Sequence 5516	L15203	GENBANK	Sequence 5568	M57567	GENBANK
Sequence 5517	L16785	GENBANK	Sequence 5569	M58028	GENBANK
Sequence 5518	L19597	GENBANK	Sequence 5570	M58485	GENBANK
Sequence 5519	L19605	GENBANK	Sequence 5571	M58549	GENBANK
Sequence 5520	L19956	GENBANK	Sequence 5572	M60457	GENBANK
Sequence 5521	L20773	GENBANK	Sequence 5573	M60857	GENBANK
Sequence 5522	L20941	GENBANK	Sequence 5574	M61832	GENBANK
Sequence 5523	L23320	GENBANK	Sequence 5575	M63573	GENBANK
Sequence 5524	L28010	GENBANK	Sequence 5576	M64098	GENBANK
Sequence 5525	L29008	GENBANK	Sequence 5577	M64241	GENBANK
Sequence 5526	L31951	GENBANK	Sequence 5578	M64571	GENBANK
Sequence 5527	L34840	GENBANK	Sequence 5579	M69066	GENBANK
Sequence 5528	L37080	GENBANK	Sequence 5580	M69180	GENBANK
Sequence 5529	L38486	GENBANK	Sequence 5581	M74777	GENBANK
Sequence 5530	L38961	GENBANK	Sequence 5582	M76180	GENBANK
Sequence 5531	L38995	GENBANK	Sequence 5583	M77830	GENBANK
Sequence 5532	L42531	GENBANK	Sequence 5584	M81757	GENBANK
Sequence 5533	L47665	GENBANK	Sequence 5585	M86752	GENBANK
Sequence 5534	M10036	GENBANK	Sequence 5586	M88279	GENBANK
Sequence 5535	M10119	GENBANK	Sequence 5587	M92381	GENBANK
Sequence 5536	M13520	GENBANK	Sequence 5588	M92843	GENBANK
Sequence 5537	M14335	GENBANK	Sequence 5589	M95178	GENBANK
Sequence 5538	M15470	GENBANK	Sequence 5590	M99701	GENBANK
Sequence 5539	M15887	GENBANK	Sequence 5591	S60099	GENBANK
Sequence 5540	M16660	GENBANK	Sequence 5592	S67325	GENBANK
Sequence 5541	M16804	GENBANK	Sequence 5593	S69022	GENBANK
Sequence 5542	M17851	GENBANK	Sequence 5594	S69272	GENBANK
Sequence 5543	M19308	GENBANK	Sequence 5595	S69738	GENBANK
Sequence 5544	M20471	GENBANK	Sequence 5596	S70154	GENBANK
Sequence 5545	M21895	GENBANK	Sequence 5597	S73591	GENBANK
Sequence 5546	M21896	GENBANK	Sequence 5598	S74678	GENBANK
Sequence 5547	M22324	GENBANK	Sequence 5599	S75755	GENBANK
Sequence 5548	M24194	GENBANK	Sequence 5600	U02390	GENBANK
Sequence 5549	M24795	GENBANK	Sequence 5601	U04209	GENBANK
Sequence 5550	M24902	GENBANK	Sequence 5602	U05291	GENBANK
Sequence 5551	M24906	GENBANK	Sequence 5603	U06632	GENBANK
Sequence 5552	M25246	GENBANK	Sequence 5604	U07919	GENBANK
Sequence 5553	M26324	GENBANK	Sequence 5605	U09550	GENBANK
Sequence 5554	M26325	GENBANK	Sequence 5606	U14510	GENBANK

# Table 3-1

Sequence 5607	U14750	GENBANK	Sequence 5659	X53777	GENBANK
Sequence 5608	U14968	GENBANK	Sequence 5660	X56998	GENBANK
Sequence 5609	U14969	GENBANK	Sequence 5661	X57398	GENBANK
Sequence 5610	U14970	GENBANK	Sequence 5662	X60221	GENBANK
Sequence 5611	U16850	GENBANK	Sequence 5663	X60708	GENBANK
Sequence 5612	U16997	GENBANK	Sequence 5664	X66276	GENBANK
Sequence 5613	U17743	GENBANK	Sequence 5665	X66534	GENBANK
Sequence 5614	U18062	GENBANK	Sequence 5666	X67951	GENBANK
Sequence 5615	U18197	GENBANK	Sequence 5667	X70394	GENBANK
Sequence 5616	U18291	GENBANK	Sequence 5668	X71129	GENBANK
Sequence 5617	U18543	GENBANK	Sequence 5669	X73114	GENBANK
Sequence 5618	U27143	GENBANK	Sequence 5670	X74070	GENBANK
Sequence 5619	U28424	GENBANK	Sequence 5671	X75546	GENBANK
Sequence 5620	U30313	GENBANK	Sequence 5672	X75593	GENBANK
Sequence 5621	U30826	GENBANK	Sequence 5673	X75861	GENBANK
Sequence 5622	U31382	GENBANK	Sequence 5674	X76105	GENBANK
Sequence 5623	U31905	GENBANK	Sequence 5675	X76538	GENBANK
Sequence 5624	U36764	GENBANK	Sequence 5676	X77196	GENBANK
Sequence 5625	U37519	GENBANK	Sequence 5677	X78137	GENBANK
Sequence 5626	U39360	GENBANK	Sequence 5678	X78520	GENBANK
Sequence 5627	U39400	GENBANK	Sequence 5679	X79389	GENBANK
Sequence 5628	U40272	GENBANK	Sequence 5680	X79888	GENBANK
Sequence 5629	U43701	GENBANK	Sequence 5681	X80822	GENBANK
Sequence 5630	U44839	GENBANK	Sequence 5682	X82157	GENBANK
Sequence 5631	U46751	GENBANK	Sequence 5683	X85373	GENBANK
Sequence 5632	U51903	GENBANK	Sequence 5684	X87241	GENBANK
Sequence 5633	U54562	GENBANK	Sequence 5685	X90583	GENBANK
Sequence 5634	U54996	GENBANK	Sequence 5686	X92098	GENBANK
Sequence 5635	U58855	GENBANK	Sequence 5687	X93036	GENBANK
Sequence 5636	U66615	GENBANK	Sequence 5688	X97065	GENBANK
Sequence 5637	U67171	GENBANK	Sequence 5689	X97674	GENBANK
Sequence 5638	U69263	GENBANK	Sequence 5690	X98801	GENBANK
Sequence 5639	U69668	GENBANK	Sequence 5691	Y00282	GENBANK
Sequence 5640	U79241	GENBANK	Sequence 5692	Y07968	GENBANK
Sequence 5641	U79304	GENBANK	Sequence 5693	Y12781	GENBANK
Sequence 5642	U80456	GENBANK	Sequence 5694	Y13936	GENBANK
Sequence 5643	U83460	GENBANK	Sequence 5695	Y16132	GENBANK
Sequence 5644	U95646	GENBANK	Sequence 5696	Y16610	GENBANK
Sequence 5645	U96721	GENBANK	Sequence 5697	Z26317	GENBANK
Sequence 5646	X00351	GENBANK	Sequence 5698	Z46973	GENBANK
Sequence 5647	X04106	GENBANK	Sequence 5699	Z50749	GENBANK
Sequence 5648	X04325	GENBANK	Sequence 5700	AA001299	dbEST
Sequence 5649	X04408	GENBANK	Sequence 5701	AA001316	dbEST
Sequence 5650	X04571	GENBANK	Sequence 5702	AA002190	dbEST
Sequence 5651	X05332	GENBANK	Sequence 5703	AA009641	dbEST
Sequence 5652	X06617	GENBANK	Sequence 5704	AA010236	dbEST
Sequence 5653	X07876	GENBANK	Sequence 5705	AA010607	dbEST
Sequence 5654	X13839	GENBANK	Sequence 5706	AA013094	dbEST
Sequence 5655	X14608	GENBANK	Sequence 5707	AA015605	dbEST
Sequence 5656	X15187	GENBANK	Sequence 5708	AA018347	dbEST
Sequence 5657	X16940	GENBANK	Sequence 5709	AA019377	dbEST
Sequence 5658	X17206	GENBANK	Sequence 5710	AA022583	dbEST



# Table 3-1

Sequence 5711	AA024336	dbEST	Sequence 5763	AA074683	dbEST
Sequence 5712	AA024532	dbEST	Sequence 5764	AA074819	dbEST
Sequence 5713	AA024967	dbEST	Sequence 5765	AA075474	dbEST
Sequence 5714	AA025731	dbEST	Sequence 5766	AA075600	dbEST
Sequence 5715	AA025875	dbEST	Sequence 5767	AA075781	dbEST
Sequence 5716	AA026658	dbEST	Sequence 5768	AA075922	dbEST
Sequence 5717	AA029143	dbEST	Sequence 5769	AA078218	dbEST
Sequence 5718	AA029157	dbEST	Sequence 5770	AA079346	dbEST
Sequence 5719	AA029584	dbEST	Sequence 5771	AA079524	dbEST
Sequence 5720	AA033517	dbEST	Sequence 5772	AA079690	dbEST
Sequence 5721	AA034255	dbEST	Sequence 5773	AA079755	dbEST
Sequence 5722	AA034946	dbEST	Sequence 5774	AA081708	dbEST
Sequence 5723	AA035773	dbEST	Sequence 5775	AA081812	dbEST
Sequence 5724	AA037217	dbEST	Sequence 5776	AA081842	dbEST
Sequence 5725	AA037857	dbEST	Sequence 5777	AA082839	dbEST
Sequence 5726	AA039546	dbEST	Sequence 5778	AA083008	dbEST
Sequence 5727	AA040140	dbEST	Sequence 5779	AA083191	dbEST
Sequence 5728	AA044004	dbEST	Sequence 5780	AA083345	dbEST
Sequence 5729	AA044291	dbEST	Sequence 5781	AA083410	dbEST
Sequence 5730	AA044570	dbEST	Sequence 5782	AA083603	dbEST
Sequence 5731	AA045185	dbEST	Sequence 5783	AA084068	dbEST
Sequence 5732	AA045342	dbEST	Sequence 5784	AA084552	dbEST
Sequence 5733	AA045388	dbEST	Sequence 5785	AA084560	dbEST
Sequence 5734	AA045741	dbEST	Sequence 5786	AA086326	dbEST
Sequence 5735	AA046040	dbEST	Sequence 5787	AA086377	dbEST
Sequence 5736	AA046483	dbEST	Sequence 5788	AA088544	dbEST
Sequence 5737	AA046836	dbEST	Sequence 5789	AA088603	dbEST
Sequence 5738	AA046973	dbEST	Sequence 5790	AA096453	dbEST
Sequence 5739	AA047015	dbEST	Sequence 5791	AA099875	dbEST
Sequence 5740	AA047304	dbEST	Sequence 5792	AA099917	dbEST
Sequence 5741	AA053250	dbEST	Sequence 5793	AA100195	dbEST
Sequence 5742	AA053399	dbEST	Sequence 5794	AA100852	dbEST
Sequence 5743	AA053475	dbEST	Sequence 5795	AA101799	dbEST
Sequence 5744	AA053514	dbEST	Sequence 5796	AA102280	dbEST
Sequence 5745	AA053557	dbEST	Sequence 5797	AA112936	dbEST
Sequence 5746	AA053747	dbEST	Sequence 5798	AA113403	dbEST
Sequence 5747	AA053757	dbEST	Sequence 5799	AA114014	dbEST
Sequence 5748	AA056462	dbEST	Sequence 5800	AA115512	dbEST
Sequence 5749	AA057029	dbEST	Sequence 5801	AA115838	dbEST
Sequence 5750	AA057243	dbEST	Sequence 5802	AA121072	dbEST
Sequence 5751	AA058605	dbEST	Sequence 5803	AA126009	dbEST
Sequence 5752	AA058899	dbEST	Sequence 5804	AA126750	dbEST
Sequence 5753	AA059309	dbEST	Sequence 5805	AA127135	dbEST
Sequence 5754	AA059355	dbEST	Sequence 5806	AA128104	dbEST
Sequence 5755	AA062994	dbEST	Sequence 5807	AA128324	dbEST
Sequence 5756	AA065036	dbEST	Sequence 5808	AA128498	dbEST
Sequence 5757	AA065214	dbEST	Sequence 5809	AA129245	dbEST
Sequence 5758	AA069457	dbEST	Sequence 5810	AA129726	dbEST
Sequence 5759	AA069814	dbEST	Sequence 5811	AA129907	dbEST
Sequence 5760	AA071084	dbEST	Sequence 5812	AA129962	dbEST
Sequence 5761	AA071439	dbEST	Sequence 5813	AA130229	dbEST
Sequence 5762	AA074575	dbEST	Sequence 5814	AA130797	dbEST

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Sequence 5815	AA130946	dbEST	Sequence 5867	AA179442	dbEST
Sequence 5816	AA131828	dbEST	Sequence 5868	AA181113	dbEST
Sequence 5817	AA132596	dbEST	Sequence 5869	AA181392	dbEST
Sequence 5818	AA132844	dbEST	Sequence 5870	AA182617	dbEST
Sequence 5819	AA133579	dbEST	Sequence 5871	AA186406	dbEST
Sequence 5820	AA134203	dbEST	Sequence 5872	AA186432	dbEST
Sequence 5821	AA134234	dbEST	Sequence 5873	AA186477	dbEST
Sequence 5822	AA134715	dbEST	Sequence 5874	AA187395	dbEST
Sequence 5823	AA135456	dbEST	Sequence 5875	AA187762	dbEST
Sequence 5824	AA135663	dbEST	Sequence 5876	AA188633	dbEST
Sequence 5825	AA136096	dbEST	Sequence 5877	AA190615	dbEST
Sequence 5826	AA137170	dbEST	Sequence 5878	AA190873	dbEST
Sequence 5827	AA143286	dbEST	Sequence 5879	AA190890	dbEST
Sequence 5828	AA143579	dbEST	Sequence 5880	AA191119	dbEST
Sequence 5829	AA146616	dbEST	Sequence 5881	AA191211	dbEST
Sequence 5830	AA146701	dbEST	Sequence 5882	AA192597	dbEST
Sequence 5831	AA147403	dbEST	Sequence 5883	AA192759	dbEST
Sequence 5832	AA147826	dbEST	Sequence 5884	AA193297	dbEST
Sequence 5833	AA148019	dbEST	Sequence 5885	AA193661	dbEST
Sequence 5834	AA148219	dbEST	Sequence 5886	AA194473	dbEST
Sequence 5835	AA149936	dbEST	Sequence 5887	AA195015	dbEST
Sequence 5836	AA150320	dbEST	Sequence 5888	AA195617	dbEST
Sequence 5837	AA150383	dbEST	Sequence 5889	AA195947	dbEST
Sequence 5838	AA150860	dbEST	Sequence 5890	AA196357	dbEST
Sequence 5839	AA151350	dbEST	Sequence 5891	AA203182	dbEST
Sequence 5840	AA151506	dbEST	Sequence 5892	AA205412	dbEST
Sequence 5841	AA151659	dbEST	Sequence 5893	AA205546	dbEST
Sequence 5842	AA152009	dbEST	Sequence 5894	AA206115	dbEST
Sequence 5843	AA152264	dbEST	Sequence 5895	AA206581	dbEST
Sequence 5844	AA155856	dbEST	Sequence 5896	AA211799	dbEST
Sequence 5845	AA156215	dbEST	Sequence 5897	AA214648	dbEST
Sequence 5846	AA157723	dbEST	Sequence 5898	AA216409	dbEST
Sequence 5847	AA159272	dbEST	Sequence 5899	AA216669	dbEST
Sequence 5848	AA159748	dbEST	Sequence 5900	AA218606	dbEST
Sequence 5849	AA160053	dbEST	Sequence 5901	AA219143	dbEST
Sequence 5850	AA160999	dbEST	Sequence 5902	AA223148	dbEST
Sequence 5851	AA164607	dbEST	Sequence 5903	AA224124	dbEST
Sequence 5852	AA164977	dbEST	Sequence 5904	AA224876	dbEST
Sequence 5853	AA165197	dbEST	Sequence 5905	AA224985	dbEST
Sequence 5854	AA166675	dbEST	Sequence 5906	AA225857	dbEST
Sequence 5855	AA167044	dbEST	Sequence 5907	AA226359	dbEST
Sequence 5856	AA167804	dbEST	Sequence 5908	AA226898	dbEST
Sequence 5857	AA171510	dbEST	Sequence 5909	AA227326	dbEST
Sequence 5858	AA171587	dbEST	Sequence 5910	AA227579	dbEST
Sequence 5859	AA172103	dbEST	Sequence 5911	AA227837	dbEST
Sequence 5860	AA172156	dbEST	Sequence 5912	AA228273	dbEST
Sequence 5861	AA173098	dbEST	Sequence 5913	AA228282	dbEST
Sequence 5862	AA173459	dbEST	Sequence 5914	AA228836	dbEST
Sequence 5863	AA173952	dbEST	Sequence 5915	AA228940	dbEST
Sequence 5864	AA176747	dbEST	Sequence 5916	AA228953	dbEST
Sequence 5865	AA176784	dbEST	Sequence 5917	AA229057	dbEST
Sequence 5866	AA176979	dbEST	Sequence 5918	AA229145	dbEST

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Sequence 5919	AA230067	dbEST	Sequence 5971	AA301205	dbEST
Sequence 5920	AA233733	dbEST	Sequence 5972	AA301513	dbEST
Sequence 5921	AA235224	dbEST	Sequence 5973	AA301629	dbEST
Sequence 5922	AA235581	dbEST	Sequence 5974	AA302313	dbEST
Sequence 5923	AA236371	dbEST	Sequence 5975	AA302919	dbEST
Sequence 5924	AA236418	dbEST	Sequence 5976	AA303594	dbEST
Sequence 5925	AA236774	dbEST	Sequence 5977	AA303960	dbEST
Sequence 5926	AA244003	dbEST	Sequence 5978	AA304827	dbEST
Sequence 5927	AA244018	dbEST	Sequence 5979	AA305081	dbEST
Sequence 5928	AA244158	dbEST	Sequence 5980	AA305121	dbEST
Sequence 5929	AA244184	dbEST	Sequence 5981	AA305143	dbEST
Sequence 5930	AA248427	dbEST	Sequence 5982	AA305331	dbEST
Sequence 5931	AA251114	dbEST	Sequence 5983	AA305333	dbEST
Sequence 5932	AA251678	dbEST	Sequence 5984	AA305409	dbEST
Sequence 5933	AA256422	dbEST	Sequence 5985	AA305774	dbEST
Sequence 5934	AA257014	dbEST	Sequence 5986	AA305819	dbEST
Sequence 5935	AA258089	dbEST	Sequence 5987	AA305824	dbEST
Sequence 5936	AA278642	dbEST	Sequence 5988	AA306040	dbEST
Sequence 5937	AA279853	dbEST	Sequence 5989	AA306182	dbEST
Sequence 5938	AA280091	dbEST	Sequence 5990	AA306223	dbEST
Sequence 5939	AA281637	dbEST	Sequence 5991	AA306983	dbEST
Sequence 5940	AA282252	dbEST	Sequence 5992	AA307033	dbEST
Sequence 5941	AA282382	dbEST	Sequence 5993	AA307224	dbEST
Sequence 5942	AA283169	dbEST	Sequence 5994	AA307612	dbEST
Sequence 5943	AA283616	dbEST	Sequence 5995	AA307669	dbEST
Sequence 5944	AA284615	dbEST	Sequence 5996	AA307728	dbEST
Sequence 5945	AA284748	dbEST	Sequence 5997	AA308091	dbEST
Sequence 5946	AA284856	dbEST	Sequence 5998	AA308207	dbEST
Sequence 5947	AA285290	dbEST	Sequence 5999	AA308237	dbEST
Sequence 5948	AA287199	dbEST	Sequence 6000	AA308574	dbEST
Sequence 5949	AA287665	dbEST	Sequence 6001	AA308812	dbEST
Sequence 5950	AA290783	dbEST	Sequence 6002	AA309832	dbEST
Sequence 5951	AA291407	dbEST	Sequence 6003	AA310978	dbEST
Sequence 5952	AA292443	dbEST	Sequence 6004	AA311044	dbEST
Sequence 5953	AA292786	dbEST	Sequence 6005	AA311048	dbEST
Sequence 5954	AA293855	dbEST	Sequence 6006	AA311227	dbEST
Sequence 5955	AA295706	dbEST	Sequence 6007	AA311677	dbEST
Sequence 5956	AA295762	dbEST	Sequence 6008	AA311896	dbEST
Sequence 5957	AA296074	dbEST	Sequence 6009	AA312406	dbEST
Sequence 5958	AA296282	dbEST	Sequence 6010	AA312864	dbEST
Sequence 5959	AA297097	dbEST	Sequence 6011	AA313209	dbEST
Sequence 5960	AA297506	dbEST	Sequence 6012	AA313468	dbEST
Sequence 5961	AA297592	dbEST	Sequence 6013	AA313653	dbEST
Sequence 5962	AA297750	dbEST	Sequence 6014	AA314146	dbEST
Sequence 5963	AA298490	dbEST	Sequence 6015	AA314473	dbEST
Sequence 5964	AA298967	dbEST	Sequence 6016	AA314673	dbEST
Sequence 5965	AA299668	dbEST	Sequence 6017	AA314961	dbEST
Sequence 5966	AA299840	dbEST	Sequence 6018	AA315049	dbEST
Sequence 5967	AA299892	dbEST	Sequence 6019	AA315188	dbEST
Sequence 5968	AA299961	dbEST	Sequence 6020	AA315441	dbEST
Sequence 5969	AA300008	dbEST	Sequence 6021	AA315510	dbEST
Sequence 5970	AA300659	dbEST	Sequence 6022	AA315950	dbEST

# Table 3-1

Sequence 6023	AA315968	dbEST	Sequence 6075	AA355308	dbEST
Sequence 6024	AA316059	dbEST	Sequence 6076	AA356436	dbEST
Sequence 6025	AA316217	dbEST	Sequence 6077	AA357077	dbEST
Sequence 6026	AA316423	dbEST	Sequence 6078	AA363019	dbEST
Sequence 6027	AA316721	dbEST	Sequence 6079	AA363481	dbEST
Sequence 6028	AA316723	dbEST	Sequence 6080	AA364707	dbEST
Sequence 6029	AA317088	dbEST	Sequence 6081	AA365150	dbEST
Sequence 6030	AA317310	dbEST	Sequence 6082	AA369660	dbEST
Sequence 6031	AA317477	dbEST	Sequence 6083	AA369804	dbEST
Sequence 6032	AA317497	dbEST	Sequence 6084	AA370548	dbEST
Sequence 6033	AA317659	dbEST	Sequence 6085	AA371017	dbEST
Sequence 6034	AA317855	dbEST	Sequence 6086	AA371613	dbEST
Sequence 6035	AA317942	dbEST	Sequence 6087	AA372171	dbEST
Sequence 6036	AA318260	dbEST	Sequence 6088	AA373314	dbEST
Sequence 6037	AA318272	dbEST	Sequence 6089	AA374073	dbEST
Sequence 6038	AA320004	dbEST	Sequence 6090	AA374376	dbEST
Sequence 6039	AA320114	dbEST	Sequence 6091	AA374561	dbEST
Sequence 6040	AA320723	dbEST	Sequence 6092	AA375454	dbEST
Sequence 6041	AA321706	dbEST	Sequence 6093	AA376123	dbEST
Sequence 6042	AA322115	dbEST	Sequence 6094	AA377218	dbEST
Sequence 6043	AA322352	dbEST	Sequence 6095	AA384272	dbEST
Sequence 6044	AA323143	dbEST	Sequence 6096	AA393061	dbEST
Sequence 6045	AA326251	dbEST	Sequence 6097	AA393485	dbEST
Sequence 6046	AA326895	dbEST	Sequence 6098	AA393906	dbEST
Sequence 6047	AA327011	dbEST	Sequence 6099	AA394311	dbEST
Sequence 6048	AA327546	dbEST	Sequence 6100	AA397452	dbEST
Sequence 6049	AA328770	dbEST	Sequence 6101	AA397702	dbEST
Sequence 6050	AA330883	dbEST	Sequence 6102	AA398929	dbEST
Sequence 6051	AA332202	dbEST	Sequence 6103	AA399024	dbEST
Sequence 6052	AA332737	dbEST	Sequence 6104	AA399070	dbEST
Sequence 6053	AA334511	dbEST	Sequence 6105	AA399281	dbEST
Sequence 6054	AA335356	dbEST	Sequence 6106	AA399632	dbEST
Sequence 6055	AA336197	dbEST	Sequence 6107	AA400527	dbEST
Sequence 6056	AA337836	dbEST	Sequence 6108	AA400692	dbEST
Sequence 6057	AA338836	dbEST	Sequence 6109	AA401501	dbEST
Sequence 6058	AA339065	dbEST	Sequence 6110	AA401520	dbEST
Sequence 6059	AA340095	dbEST	Sequence 6111	AA401809	dbEST
Sequence 6060	AA340608	dbEST	Sequence 6112	AA404376	dbEST
Sequence 6061	AA340634	dbEST	Sequence 6113	AA404722	dbEST
Sequence 6062	AA340927	dbEST	Sequence 6114	AA411585	dbEST
Sequence 6063	AA341690	dbEST	Sequence 6115	AA412302	dbEST
Sequence 6064	AA341987	dbEST	Sequence 6116	AA412500	dbEST
Sequence 6065	AA343532	dbEST	Sequence 6117	AA417643	dbEST
Sequence 6066	AA344600	dbEST	Sequence 6118	AA417842	dbEST
Sequence 6067	AA345762	dbEST	Sequence 6119	AA420435	dbEST
Sequence 6068	AA345876	dbEST	Sequence 6120	AA420462	dbEST
Sequence 6069	AA346253	dbEST	Sequence 6121	AA420758	dbEST
Sequence 6070	AA347236	dbEST	Sequence 6122	AA420800	dbEST
Sequence 6071	AA347436	dbEST	Sequence 6123	AA420825	dbEST
Sequence 6072	AA352062	dbEST	Sequence 6124	AA420845	dbEST
Sequence 6073	AA354376	dbEST	Sequence 6125	AA422173	dbEST
Sequence 6074	AA355036	dbEST	Sequence 6126	AA424243	dbEST

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Sequence 6127	AA425292	dbEST	Sequence 6179	AA469348	dbEST
Sequence 6128	AA425305	dbEST	Sequence 6180	AA469926	dbEST
Sequence 6129	AA425460	dbEST	Sequence 6181	AA469979	dbEST
Sequence 6130	AA425492	dbEST	Sequence 6182	AA470575	dbEST
Sequence 6131	AA425509	dbEST	Sequence 6183	AA470602	dbEST
Sequence 6132	AA425583	dbEST	Sequence 6184	AA471056	dbEST
Sequence 6133	AA426351	dbEST	Sequence 6185	AA477075	dbEST
Sequence 6134	AA428216	dbEST	Sequence 6186	AA477397	dbEST
Sequence 6135	AA431579	dbEST	Sequence 6187	AA477803	dbEST
Sequence 6136	AA433869	dbEST	Sequence 6188	AA478415	dbEST
Sequence 6137	AA434286	dbEST	Sequence 6189	AA479151	dbEST
Sequence 6138	AA435894	dbEST	Sequence 6190	AA479167	dbEST
Sequence 6139	AA436394	dbEST	Sequence 6191	AA480124	dbEST
Sequence 6140	AA436652	dbEST	Sequence 6192	AA480282	dbEST
Sequence 6141	AA437304	dbEST	Sequence 6193	AA480529	dbEST
Sequence 6142	AA442017	dbEST	Sequence 6194	AA481738	dbEST
Sequence 6143	AA442145	dbEST	Sequence 6195	AA484711	dbEST
Sequence 6144	AA442287	dbEST	Sequence 6196	AA484821	dbEST
Sequence 6145	AA442517	dbEST	Sequence 6197	AA485467	dbEST
Sequence 6146	AA443757	dbEST	Sequence 6198	AA485853	dbEST
Sequence 6147	AA443834	dbEST	Sequence 6199	AA486619	dbEST
Sequence 6148	AA444072	dbEST	Sequence 6200	AA486628	dbEST
Sequence 6149	AA444386	dbEST	Sequence 6201	AA486837	dbEST
Sequence 6150	AA446103	dbEST	Sequence 6202	AA487192	dbEST
Sequence 6151	AA447349	dbEST	Sequence 6203	AA488014	dbEST
Sequence 6152	AA447563	dbEST	Sequence 6204	AA489323	dbEST
Sequence 6153	AA448526	dbEST	Sequence 6205	AA490047	dbEST
Sequence 6154	AA449228	dbEST	Sequence 6206	AA491272	dbEST
Sequence 6155	AA450120	dbEST	Sequence 6207	AA491302	dbEST
Sequence 6156	AA452177	dbEST	Sequence 6208	AA492026	dbEST
Sequence 6157	AA453134	dbEST	Sequence 6209	AA492038	dbEST
Sequence 6158	AA453310	dbEST	Sequence 6210	AA492042	dbEST
Sequence 6159	AA453333	dbEST	Sequence 6211	AA492219	dbEST
Sequence 6160	AA453478	dbEST	Sequence 6212	AA492280	dbEST
Sequence 6161	AA453719	dbEST	Sequence 6213	AA492390	dbEST
Sequence 6162	AA454962	dbEST	Sequence 6214	AA496932	dbEST
Sequence 6163	AA456246	dbEST	Sequence 6215	AA501968	dbEST
Sequence 6164	AA459208	dbEST	Sequence 6216	AA502897	dbEST
Sequence 6165	AA459871	dbEST	Sequence 6217	AA502955	dbEST
Sequence 6166	AA460440	dbEST	Sequence 6218	AA502979	dbEST
Sequence 6167	AA463469	dbEST	Sequence 6219	AA503718	dbEST
Sequence 6168	AA464160	dbEST	Sequence 6220	AA503930	dbEST
Sequence 6169	AA464338	dbEST	Sequence 6221	AA503943	dbEST
Sequence 6170	AA465494	dbEST	Sequence 6222	AA504173	dbEST
Sequence 6171	AA467748	dbEST	Sequence 6223	AA504246	dbEST
Sequence 6172	AA467761	dbEST	Sequence 6224	AA506607	dbEST
Sequence 6173	AA468151	dbEST	Sequence 6225	AA506923	dbEST
Sequence 6174	AA468167	dbEST	Sequence 6226	AA506967	dbEST
Sequence 6175	AA468504	dbEST	Sequence 6227	AA507084	dbEST
Sequence 6176	AA468760	dbEST	Sequence 6228	AA507511	dbEST
Sequence 6177	AA469129	dbEST	Sequence 6229	AA508552	dbEST
Sequence 6178	AA469151	dbEST	Sequence 6230	AA508579	dbEST

# Table 3-1

Sequence 6231	AA508898	dbEST	Sequence 6283	AA574288	dbEST
Sequence 6232	AA513056	dbEST	Sequence 6284	AA574397	dbEST
Sequence 6233	AA513597	dbEST	Sequence 6285	AA574436	dbEST
Sequence 6234	AA514042	dbEST	Sequence 6286	AA576243	dbEST
Sequence 6235	AA515576	dbEST	Sequence 6287	AA576407	dbEST
Sequence 6236	AA515857	dbEST	Sequence 6288	AA578009	dbEST
Sequence 6237	AA516531	dbEST	Sequence 6289	AA578577	dbEST
Sequence 6238	AA521140	dbEST	Sequence 6290	AA578646	dbEST
Sequence 6239	AA523252	dbEST	Sequence 6291	AA578773	dbEST
Sequence 6240	AA523671	dbEST	Sequence 6292	AA579039	dbEST
Sequence 6241	AA523902	dbEST	Sequence 6293	AA579904	dbEST
Sequence 6242	AA524651	dbEST	Sequence 6294	AA580097	dbEST
Sequence 6243	AA525032	dbEST	Sequence 6295	AA580829	dbEST
Sequence 6244	AA525419	dbEST	Sequence 6296	AA581716	dbEST
Sequence 6245	AA525497	dbEST	Sequence 6297	AA583350	dbEST
Sequence 6246	AA525958	dbEST	Sequence 6298	AA583353	dbEST
Sequence 6247	AA526244	dbEST	Sequence 6299	AA587020	dbEST
Sequence 6248	AA526283	dbEST	Sequence 6300	AA587243	dbEST
Sequence 6249	AA526834	dbEST	Sequence 6301	AA587459	dbEST
Sequence 6250	AA527667	dbEST	Sequence 6302	AA588685	dbEST
Sequence 6251	AA527805	dbEST	Sequence 6303	AA588754	dbEST
Sequence 6252	AA528204	dbEST	Sequence 6304	AA588882	dbEST
Sequence 6253	AA531198	dbEST	Sequence 6305	AA593159	dbEST
Sequence 6254	AA531509	dbEST	Sequence 6306	AA593668	dbEST
Sequence 6255	AA533115	dbEST	Sequence 6307	AA595100	dbEST
Sequence 6256	AA533386	dbEST	Sequence 6308	AA599416	dbEST
Sequence 6257	AA533494	dbEST	Sequence 6309	AA600257	dbEST
Sequence 6258	AA533709	dbEST	Sequence 6310	AA603265	dbEST
Sequence 6259	AA533785	dbEST	Sequence 6311	AA603834	dbEST
Sequence 6260	AA534246	dbEST	Sequence 6312	AA613908	dbEST
Sequence 6261	AA534778	dbEST	Sequence 6313	AA618486	dbEST
Sequence 6262	AA535218	dbEST	Sequence 6314	AA620750	dbEST
Sequence 6263	AA535384	dbEST	Sequence 6315	AA621031	dbEST
Sequence 6264	AA535695	dbEST	Sequence 6316	AA621073	dbEST
Sequence 6265	AA541677	dbEST	Sequence 6317	AA621820	dbEST
Sequence 6266	AA548308	dbEST	Sequence 6318	AA625415	dbEST
Sequence 6267	AA550927	dbEST	Sequence 6319	AA625485	dbEST
Sequence 6268	AA551894	dbEST	Sequence 6320	AA625833	dbEST
Sequence 6269	AA552321	dbEST	Sequence 6321	AA626161	dbEST
Sequence 6270	AA552842	dbEST	Sequence 6322	AA626274	dbEST
Sequence 6271	AA558611	dbEST	Sequence 6323	AA626439	dbEST
Sequence 6272	AA558636	dbEST	Sequence 6324	AA628530	dbEST
Sequence 6273	AA558976	dbEST	Sequence 6325	AA629325	dbEST
Sequence 6274	AA564277	dbEST	Sequence 6326	AA629581	dbEST
Sequence 6275	AA564484	dbEST	Sequence 6327	AA630298	dbEST
Sequence 6276	AA565996	dbEST	Sequence 6328	AA631446	dbEST
Sequence 6277	AA569344	dbEST	Sequence 6329	AA631868	dbEST
Sequence 6278	AA569434	dbEST	Sequence 6330	AA632427	dbEST
Sequence 6279	AA569482	dbEST	Sequence 6331	AA633399	dbEST
Sequence 6280	AA573368	dbEST	Sequence 6332	AA633846	dbEST
Sequence 6281	AA573646	dbEST	Sequence 6333	AA635288	dbEST
Sequence 6282	AA573742	dbEST	Sequence 6334	AA640133	dbEST

# Table 3-1

Sequence 6335	AA640344	dbEST	Sequence 6387	AA758592	dbEST
Sequence 6336	AA640889	dbEST	Sequence 6388	AA761739	dbEST
Sequence 6337	AA641585	dbEST	Sequence 6389	AA768762	dbEST
Sequence 6338	AA641623	dbEST	Sequence 6390	AA774265	dbEST
Sequence 6339	AA642495	dbEST	Sequence 6391	AA775625	dbEST
Sequence 6340	AA648194	dbEST	Sequence 6392	AA776709	dbEST
Sequence 6341	AA652478	dbEST	Sequence 6393	AA779427	dbEST
Sequence 6342	AA654527	dbEST	Sequence 6394	AA805361	dbEST
Sequence 6343	AA657830	dbEST	Sequence 6395	AA806555	dbEST
Sequence 6344	AA659142	dbEST	Sequence 6396	AA813373	dbEST
Sequence 6345	AA659391	dbEST	Sequence 6397	AA814822	dbEST
Sequence 6346	AA662111	dbEST	Sequence 6398	AA824416	dbEST
Sequence 6347	AA662369	dbEST	Sequence 6399	AA825612	dbEST
Sequence 6348	AA662822	dbEST	Sequence 6400	AA827079	dbEST
Sequence 6349	AA663453	dbEST	Sequence 6401	AA827968	dbEST
Sequence 6350	AA664480	dbEST	Sequence 6402	AA828243	dbEST
Sequence 6351	AA669438	dbEST	Sequence 6403	AA830856	dbEST
Sequence 6352	AA670205	dbEST	Sequence 6404	AA831148	dbEST
Sequence 6353	AA677550	dbEST	Sequence 6405	AA835638	dbEST
Sequence 6354	AA687179	dbEST	Sequence 6406	AA838377	dbEST
Sequence 6355	AA687216	dbEST	Sequence 6407	AA838431	dbEST
Sequence 6356	AA687370	dbEST	Sequence 6408	AA838482	dbEST
Sequence 6357	AA687538	dbEST	Sequence 6409	AA843133	dbEST
Sequence 6358	AA687674	dbEST	Sequence 6410	AA845390	dbEST
Sequence 6359	AA687718	dbEST	Sequence 6411	AA846335	dbEST
Sequence 6360	AA693742	dbEST	Sequence 6412	AA852998	dbEST
Sequence 6361	AA694055	dbEST	Sequence 6413	AA857872	dbEST
Sequence 6362	AA694120	dbEST	Sequence 6414	AA861986	dbEST
Sequence 6363	AA700509	dbEST	Sequence 6415	AA862309	dbEST
Sequence 6364	AA701607	dbEST	Sequence 6416	AA864840	dbEST
Sequence 6365	AA702084	dbEST	Sequence 6417	AA872710	dbEST
Sequence 6366	AA702131	dbEST	Sequence 6418	AA873534	dbEST
Sequence 6367	AA702891	dbEST	Sequence 6419	AA877864	dbEST
Sequence 6368	AA703838	dbEST	Sequence 6420	AA883508	dbEST
Sequence 6369	AA703925	dbEST	Sequence 6421	AA885780	dbEST
Sequence 6370	AA704323	dbEST	Sequence 6422	AA885835	dbEST
Sequence 6371	AA705957	dbEST	Sequence 6423	AA887235	dbEST
Sequence 6372	AA705986	dbEST	Sequence 6424	AA890032	dbEST
Sequence 6373	AA706314	dbEST	Sequence 6425	AA894781	dbEST
Sequence 6374	AA707377	dbEST	Sequence 6426	AA894929	dbEST
Sequence 6375	AA707750	dbEST	Sequence 6427	AA902127	dbEST
Sequence 6376	AA708457	dbEST	Sequence 6428	AA902256	dbEST
Sequence 6377	AA709388	dbEST	Sequence 6429	AA903809	dbEST
Sequence 6378	AA714481	dbEST	Sequence 6430	AA904647	dbEST
Sequence 6379	AA716097	dbEST	Sequence 6431	AA905065	dbEST
Sequence 6380	AA719530	dbEST	Sequence 6432	AA908930	dbEST
Sequence 6381	AA725298	dbEST	Sequence 6433	AA909977	dbEST
Sequence 6382	AA725836	dbEST	Sequence 6434	AA911903	dbEST
Sequence 6383	AA732352	dbEST	Sequence 6435	AA912713	dbEST
Sequence 6384	AA745678	dbEST	Sequence 6436	AA917937	dbEST
Sequence 6385	AA747515	dbEST	Sequence 6437	AA923547	dbEST
Sequence 6386	AA748033	dbEST	Sequence 6438	AA926656	dbEST

# Table 3-1

Sequence 6439	AA928411	dbEST	Sequence 6491	AI085393	dbEST
Sequence 6440	AA932331	dbEST	Sequence 6492	AI087412	dbEST
Sequence 6441	AA934851	dbEST	Sequence 6493	AI089394	dbEST
Sequence 6442	AA935485	dbEST	Sequence 6494	AI089526	dbEST
Sequence 6443	AA935560	dbEST	Sequence 6495	AI089948	dbEST
Sequence 6444	AA936089	dbEST	Sequence 6496	AI090786	dbEST
Sequence 6445	AA937513	dbEST	Sequence 6497	AI091736	dbEST
Sequence 6446	AA937773	dbEST	Sequence 6498	AI095875	dbEST
Sequence 6447	AA938181	dbEST	Sequence 6499	AI096493	dbEST
Sequence 6448	AA938717	dbEST	Sequence 6500	AI123916	dbEST
Sequence 6449	AA939023	dbEST	Sequence 6501	AI124532	dbEST
Sequence 6450	AA948276	dbEST	Sequence 6502	AI125642	dbEST
Sequence 6451	AA970266	dbEST	Sequence 6503	AI127167	dbEST
Sequence 6452	AA972530	dbEST	Sequence 6504	AI127176	dbEST
Sequence 6453	AA972602	dbEST	Sequence 6505	AI127424	dbEST
Sequence 6454	AA974137	dbEST	Sequence 6506	AI127455	dbEST
Sequence 6455	AA975275	dbEST	Sequence 6507	AI127556	dbEST
Sequence 6456	AA977226	dbEST	Sequence 6508	AI128918	dbEST
Sequence 6457	AA977833	dbEST	Sequence 6509	AI129342	dbEST
Sequence 6458	AA978353	dbEST	Sequence 6510	AI129403	dbEST
Sequence 6459	AA983560	dbEST	Sequence 6511	AI133096	dbEST
Sequence 6460	AA985190	dbEST	Sequence 6512	AI133152	dbEST
Sequence 6461	AA994534	dbEST	Sequence 6513	AI133330	dbEST
Sequence 6462	AA995483	dbEST	Sequence 6514	AI133381	dbEST
Sequence 6463	AF017688	dbEST	Sequence 6515	AI133402	dbEST
Sequence 6464	AF034176	dbEST	Sequence 6516	AI139036	dbEST
Sequence 6465	AI015053	dbEST	Sequence 6517	AI139157	dbEST
Sequence 6466	AI016700	dbEST	Sequence 6518	AI140251	dbEST
Sequence 6467	AI018625	dbEST	Sequence 6519	AI140421	dbEST
Sequence 6468	AI022134	dbEST	Sequence 6520	AI141483	dbEST
Sequence 6469	AI022855	dbEST	Sequence 6521	AI142083	dbEST
Sequence 6470	AI023931	dbEST	Sequence 6522	AI148437	dbEST
Sequence 6471	AI027887	dbEST	Sequence 6523	AI149743	dbEST
Sequence 6472	AI028122	dbEST	Sequence 6524	AI151482	dbEST
Sequence 6473	AI028708	dbEST	Sequence 6525	AI160324	dbEST
Sequence 6474	AI032401	dbEST	Sequence 6526	AI161333	dbEST
Sequence 6475	AI034431	dbEST	Sequence 6527	AI174828	dbEST
Sequence 6476	AI041847	dbEST	Sequence 6528	AI186545	dbEST
Sequence 6477	AI042059	dbEST	Sequence 6529	AI188641	dbEST
Sequence 6478	AI052112	dbEST	Sequence 6530	AI190480	dbEST
Sequence 6479	AI055870	dbEST	Sequence 6531	AI192932	dbEST
Sequence 6480	AI056489	dbEST	Sequence 6532	AI197946	dbEST
Sequence 6481	AI057142	dbEST	Sequence 6533	AI198625	dbEST
Sequence 6482	AI074397	dbEST	Sequence 6534	AI199544	dbEST
Sequence 6483	AI074613	dbEST	Sequence 6535	AI200798	dbEST
Sequence 6484	AI078381	dbEST	Sequence 6536	AI202026	dbEST
Sequence 6485	AI080170	dbEST	Sequence 6537	AI203141	dbEST
Sequence 6486	AI080267	dbEST	Sequence 6538	AI204308	dbEST
Sequence 6487	AI080485	dbEST	Sequence 6539	AI205228	dbEST
Sequence 6488	AI081291	dbEST	Sequence 6540	AI206063	dbEST
Sequence 6489	AI084101	dbEST	Sequence 6541	AI207781	dbEST
Sequence 6490	AI084916	dbEST	Sequence 6542	AI216969	dbEST



# Table 3-1

Sequence 6543	AI217088	dbEST	Sequence 6598	AI347473	dbEST
Sequence 6544	AI217172	dbEST	Sequence 6596	AI349099	dbEST
Sequence 6545	AI217964	dbEST	Sequence 6597	AI349937	dbEST
Sequence 6546	AI219278	dbEST	Sequence 6598	AI357472	dbEST
Sequence 6547	AI220051	dbEST	Sequence 6599	AI360165	dbEST
Sequence 6548	AI239506	dbEST	Sequence 6600	AI366549	dbEST
Sequence 6549	AI241117	dbEST	Sequence 6601	AI368743	dbEST
Sequence 6550	AI241659	dbEST	Sequence 6602	AI369849	dbEST
Sequence 6551	AI241744	dbEST	Sequence 6603	AI377012	dbEST
Sequence 6552	AI246383	dbEST	Sequence 6604	AI378613	dbEST
Sequence 6553	AI249764	dbEST	Sequence 6605	AI380537	dbEST
Sequence 6554	AI250055	dbEST	Sequence 6606	AI380842	dbEST
Sequence 6555	AI252084	dbEST	Sequence 6607	AI401771	dbEST
Sequence 6556	AI252283	dbEST	Sequence 6608	AI417016	dbEST
Sequence 6557	AI253099	dbEST	Sequence 6609	AI421249	dbEST
Sequence 6558	AI253330	dbEST	Sequence 6610	AI431350	dbEST
Sequence 6559	AI253335	dbEST	Sequence 6611	AI433818	dbEST
Sequence 6560	AI253363	dbEST	Sequence 6612	AI434250	dbEST
Sequence 6561	AI261763	dbEST	Sequence 6613	AI435349	dbEST
Sequence 6562	AI267185	dbEST	Sequence 6614	AI439987	dbEST
Sequence 6563	AI267282	dbEST	Sequence 6615	AI446249	dbEST
Sequence 6564	AI267502	dbEST	Sequence 6616	AI452707	dbEST
Sequence 6565	AI269158	dbEST	Sequence 6617	AI453402	dbEST
Sequence 6566	AI273636	dbEST	Sequence 6618	AI474125	dbEST
Sequence 6567	AI276399	dbEST	Sequence 6619	AI475810	dbEST
Sequence 6568	AI276576	dbEST	Sequence 6620	AI479948	dbEST
Sequence 6569	AI276662	dbEST	Sequence 6621	AI491775	dbEST
Sequence 6570	AI278014	dbEST	Sequence 6622	AI499331	dbEST
Sequence 6571	AI281196	dbEST	Sequence 6623	AI525654	dbEST
Sequence 6572	AI281926	dbEST	Sequence 6624	AI525843	dbEST
Sequence 6573	AI282318	dbEST	Sequence 6625	AI536833	dbEST
Sequence 6574	AI298059	dbEST	Sequence 6626	AI547041	dbEST
Sequence 6575	AI300532	dbEST	Sequence 6627	AI547068	dbEST
Sequence 6576	AI300553	dbEST	Sequence 6628	AI547090	dbEST
Sequence 6577	AI302799	dbEST	Sequence 6629	AI547125	dbEST
Sequence 6578	AI304935	dbEST	Sequence 6630	AI547285	dbEST
Sequence 6579	AI310138	dbEST	Sequence 6631	AI557225	dbEST
Sequence 6580	AI312325	dbEST	Sequence 6632	AI557231	dbEST
Sequence 6581	AI318091	dbEST	Sequence 6633	AI557246	dbEST
Sequence 6582	AI335028	dbEST	Sequence 6634	AI557269	dbEST
Sequence 6583	AI335178	dbEST	Sequence 6635	AI557458	dbEST
Sequence 6584	AI336501	dbEST	Sequence 6636	AI557495	dbEST
Sequence 6585	AI336800	dbEST	Sequence 6637	AI563921	dbEST
Sequence 6586	AI336949	dbEST	Sequence 6638	AI566084	dbEST
Sequence 6587	AI338603	dbEST	Sequence 6639	AI570349	dbEST
Sequence 6588	AI339354	dbEST	Sequence 6640	AI612873	dbEST
Sequence 6589	AI340981	dbEST	Sequence 6641	AI627356	dbEST
Sequence 6590	AI341972	dbEST	Sequence 6642	AI630118	dbEST
Sequence 6591	AI342546	dbEST	Sequence 6643	AI630685	dbEST
Sequence 6592	AI342937	dbEST	Sequence 6644	AI630985	dbEST
Sequence 6593	AI343692	dbEST	Sequence 6645	AI631745	dbEST
Sequence 6594	AI346657	dbEST	Sequence 6646	AI632244	dbEST

# Table 3-1

Sequence 6647	AI632501	dbEST	Sequence 6700	AI929339	dbEST
Sequence 6648	AI636701	dbEST	Sequence 6701	AI934595	dbEST
Sequence 6649	AI653367	dbEST	Sequence 6702	AI951049	dbEST
Sequence 6650	AI654122	dbEST	Sequence 6703	AI952286	dbEST
Sequence 6651	AI659898	dbEST	Sequence 6704	AI961413	dbEST
Sequence 6652	AI660243	dbEST	Sequence 6705	AI968069	dbEST
Sequence 6653	AI669052	dbEST	Sequence 6706	AI969804	dbEST
Sequence 6654	AI674586	dbEST	Sequence 6707	AI978832	dbEST
Sequence 6655	AI680416	dbEST	Sequence 6708	AL035756	dbEST
Sequence 6656	AI680506	dbEST	Sequence 6709	AL036801	dbEST
Sequence 6657	AI684170	dbEST	Sequence 6710	AL036890	dbEST
Sequence 6658	AI691072	dbEST	Sequence 6711	AL037798	dbEST
Sequence 6659	AI696513	dbEST	Sequence 6712	AL038242	dbEST
Sequence 6660	AI700228	dbEST	Sequence 6713	AL038395	dbEST
Sequence 6661	AI719425	dbEST	Sequence 6714	AL039175	dbEST
Sequence 6662	AI719701	dbEST	Sequence 6715	AL039507	dbEST
Sequence 6663	AI720354	dbEST	Sequence 6716	AL040632	dbEST
Sequence 6664	AI732097	dbEST	Sequence 6717	AL040676	dbEST
Sequence 6665	AI734266	dbEST	Sequence 6718	AL044040	dbEST
Sequence 6666	AI734854	dbEST	Sequence 6719	AL045977	dbEST
Sequence 6667	AI735683	dbEST	Sequence 6720	AL046005	dbEST
Sequence 6668	AI740869	dbEST	Sequence 6721	AL046079	dbEST
Sequence 6669	AI741192	dbEST	Sequence 6722	AL048748	dbEST
Sequence 6670	AI749547	dbEST	Sequence 6723	AL049145	dbEST
Sequence 6671	AI751930	dbEST	Sequence 6724	AL118746	dbEST
Sequence 6672	AI752546	dbEST	Sequence 6725	AL119449	dbEST
Sequence 6673	AI752913	dbEST	Sequence 6726	AL119462	dbEST
Sequence 6674	AI753229	dbEST	Sequence 6727	AL120558	dbEST
Sequence 6675	AI753662	dbEST	Sequence 6728	AL120741	dbEST
Sequence 6676	AI753951	dbEST	Sequence 6729	AL120789	dbEST
Sequence 6677	AI754071	dbEST	Sequence 6730	AL121220	dbEST
Sequence 6678	AI755085	dbEST	Sequence 6731	AL121488	dbEST
Sequence 6679	AI796120	dbEST	Sequence 6732	AW003821	dbEST
Sequence 6680	AI810698	dbEST	Sequence 6733	AW003952	dbEST
Sequence 6681	AI813937	dbEST	Sequence 6734	AW005947	dbEST
Sequence 6682	AI815677	dbEST	Sequence 6735	AW015229	dbEST
Sequence 6683	AI815703	dbEST	Sequence 6736	AW015828	dbEST
Sequence 6684	AI815972	dbEST	Sequence 6737	AW021832	dbEST
Sequence 6685	AI815987	dbEST	Sequence 6738	AW026131	dbEST
Sequence 6686	AI816235	dbEST	Sequence 6739	AW026502	dbEST
Sequence 6687	AI816313	dbEST	Sequence 6740	AW055209	dbEST
Sequence 6688	AI816938	dbEST	Sequence 6741	AW068372	dbEST
Sequence 6689	AI818255	dbEST	Sequence 6742	AW082236	dbEST
Sequence 6690	AI825504	dbEST	Sequence 6743	AW087623	dbEST
Sequence 6691	AI825799	dbEST	Sequence 6744	AW090304	dbEST
Sequence 6692	AI859156	dbEST	Sequence 6745	AW102895	dbEST
Sequence 6693	AI878846	dbEST	Sequence 6746	AW130969	dbEST
Sequence 6694	AI879036	dbEST	Sequence 6747	AW135062	dbEST
Sequence 6695	AI884963	dbEST	Sequence 6748	AW135187	dbEST
Sequence 6696	AI889347	dbEST	Sequence 6749	AW157303	dbEST
Sequence 6697	AI914133	dbEST	Sequence 6750	AW160399	dbEST
Sequence 6698	AI917110	dbEST		AW160696	dbEST

# Table 3-1

Sequence 6751	AW161200	dbEST	Sequence 6803	N79712	dbEST
Sequence 6752	AW161365	dbEST	Sequence 6804	N94351	dbEST
Sequence 6753	AW161467	dbEST	Sequence 6805	N98328	dbEST
Sequence 6754	AW162502	dbEST	Sequence 6806	N99088	dbEST
Sequence 6755	AW176042	dbEST	Sequence 6807	R12356	dbEST
Sequence 6756	AW178342	dbEST	Sequence 6808	R16295	dbEST
Sequence 6757	AW179006	dbEST	Sequence 6809	R16408	dbEST
Sequence 6758	C03130	dbEST	Sequence 6810	R19453	dbEST
Sequence 6759	C18148	dbEST	Sequence 6811	R19869	dbEST
Sequence 6760	C18654	dbEST	Sequence 6812	R20063	dbEST
Sequence 6761	D12135	dbEST	Sequence 6813	R24400	dbEST
Sequence 6762	D30921	dbEST	Sequence 6814	R25464	dbEST
Sequence 6763	D58694	dbEST	Sequence 6815	R33351	dbEST
Sequence 6764	D61285	dbEST	Sequence 6816	R45686	dbEST
Sequence 6765	D82149	dbEST	Sequence 6817	R53758	dbEST
Sequence 6766	D82176	dbEST	Sequence 6818	R56382	dbEST
Sequence 6767	F01265	dbEST	Sequence 6819	R61196	dbEST
Sequence 6768	F01327	dbEST	Sequence 6820	R66162	dbEST
Sequence 6769	F05508	dbEST	Sequence 6821	R70193	dbEST
Sequence 6770	H02725	dbEST	Sequence 6822	R70570	dbEST
Sequence 6771	H04072	dbEST	Sequence 6823	R72768	dbEST
Sequence 6772	H10429	dbEST	Sequence 6824	R91218	dbEST
Sequence 6773	H10482	dbEST	Sequence 6825	R94399	dbEST
Sequence 6774	H12109	dbEST	Sequence 6826	R99755	dbEST
Sequence 6775	H12519	dbEST	Sequence 6827	T08329	dbEST
Sequence 6776	H13339	dbEST	Sequence 6828	T34459	dbEST
Sequence 6777	H17773	dbEST	Sequence 6829	T35276	dbEST
Sequence 6778	H19393	dbEST	Sequence 6830	T60601	dbEST
Sequence 6779	H38564	dbEST	Sequence 6831	T67978	dbEST
Sequence 6780	H47325	dbEST	Sequence 6832	T68894	dbEST
Sequence 6781	H48697	dbEST	Sequence 6833	T71387	dbEST
Sequence 6782	H51749	dbEST	Sequence 6834	T73262	dbEST
Sequence 6783	H54240	dbEST	Sequence 6835	T81537	dbEST
Sequence 6784	H59731	dbEST	Sequence 6836	W15207	dbEST
Sequence 6785	H66398	dbEST	Sequence 6837	W15554	dbEST
Sequence 6786	H82596	dbEST	Sequence 6838	W25142	dbEST
Sequence 6787	H84670	dbEST	Sequence 6839	W26372	dbEST
Sequence 6788	H89582	dbEST	Sequence 6840	W30832	dbEST
Sequence 6789	H93264	dbEST	Sequence 6841	W38726	dbEST
Sequence 6790	H99333	dbEST	Sequence 6842	W38956	dbEST
Sequence 6791	N23771	dbEST	Sequence 6843	W42913	dbEST
Sequence 6792	N39674	dbEST	Sequence 6844	W73290	dbEST
Sequence 6793	N39836	dbEST	Sequence 6845	W76133	dbEST
Sequence 6794	N40375	dbEST	Sequence 6846	W80496	dbEST
Sequence 6795	N42929	dbEST	Sequence 6847	W81084	dbEST
Sequence 6796	N44743	dbEST	Sequence 6848	N40101	NUCPATENT
Sequence 6797	N47292	dbEST	Sequence 6849	N91258	NUCPATENT
Sequence 6798	N49346	dbEST	Sequence 6850	Q24595	NUCPATENT
Sequence 6799	N56237	dbEST	Sequence 6851	Q63815	NUCPATENT
Sequence 6800	N62799	dbEST	Sequence 6852	Q97381	NUCPATENT
Sequence 6801	N63387	dbEST	Sequence 6853	T74203	NUCPATENT
Sequence 6802	N75468	dbEST	Sequence 6854	V07906	NUCPATENT

# Table 3-1

Sequence 6855	V30918	NUCPATENT	Sequence 6905	AF035839	GENBANK
Sequence 6856	V34207	NUCPATENT	Sequence 6906	AF044957	GENBANK
Sequence 6857	V34226	NUCPATENT	Sequence 6907	AF048977	GENBANK
Sequence 6858	V34305	NUCPATENT	Sequence 6908	AF052138	GENBANK
Sequence 6859	V35555	NUCPATENT	Sequence 6909	AF054183	GENBANK
Sequence 6860	V43604	NUCPATENT	Sequence 6910	AF054987	GENBANK
Sequence 6861	V58584	NUCPATENT	Sequence 6911	AF055473	GENBANK
Sequence 6862	V58756	NUCPATENT	Sequence 6912	AF055474	GENBANK
Sequence 6863	V58761	NUCPATENT	Sequence 6913	AF067396	GENBANK
Sequence 6864	V62427	NUCPATENT	Sequence 6914	AF068117	GENBANK
Sequence 6865	V69855	NUCPATENT	Sequence 6915	AF068754	GENBANK
Sequence 6866	V70354	NUCPATENT	Sequence 6916	AF069301	GENBANK
Sequence 6867	V72125	NUCPATENT	Sequence 6917	AF070655	GENBANK
Sequence 6868	V72211	NUCPATENT	Sequence 6918	AF071172	GENBANK
Sequence 6869	V84448	NUCPATENT	Sequence 6919	AF071748	GENBANK
Sequence 6870	X27262	NUCPATENT	Sequence 6920	AF073298	GENBANK
Sequence 6871	X27278	NUCPATENT	Sequence 6921	AF077045	GENBANK
Sequence 6872	X30167	NUCPATENT	Sequence 6922	AF077202	GENBANK
Sequence 6873	X36344	NUCPATENT	Sequence 6923	AF083190	GENBANK
Sequence 6874	X36833	NUCPATENT	Sequence 6924	AF085844	GENBANK
Sequence 6875	X37486	NUCPATENT	Sequence 6925	AF086251	GENBANK
Sequence 6876	X39662	NUCPATENT	Sequence 6926	AF088035	GENBANK
Sequence 6877	X40462	NUCPATENT	Sequence 6927	AF091073	GENBANK
Sequence 6878	X51602	NUCPATENT	Sequence 6928	AF100759	GENBANK
Sequence 6879	X97772	NUCPATENT	Sequence 6929	AF101044	GENBANK
Sequence 6880	X97841	NUCPATENT	Sequence 6930	AF140598	GENBANK
Sequence 6881	X97888	NUCPATENT	Sequence 6931	AF147330	GENBANK
Sequence 6882	X98901	NUCPATENT	Sequence 6932	AF151823	GENBANK
Sequence 6883	X99098	NUCPATENT	Sequence 6933	AF151830	GENBANK
Sequence 6884	Z00842	NUCPATENT	Sequence 6934	AF153603	GENBANK
Sequence 6885	Z06250	NUCPATENT	Sequence 6935	AF153612	GENBANK
Sequence 6886	Z10658	NUCPATENT	Sequence 6936	AF170708	GENBANK
Sequence 6887	Z15890	NUCPATENT	Sequence 6937	AF176574	GENBANK
Sequence 6888	Z24862	NUCPATENT	Sequence 6938	AJ007398	GENBANK
Sequence 6889	AC29871	PREPATNUC	Sequence 6939	AL049981	GENBANK
Sequence 6890	AC31081	PREPATNUC	Sequence 6940	AL050089	GENBANK
Sequence 6891	AC33416	PREPATNUC	Sequence 6941	AL050291	GENBANK
Sequence 6892	AC33722	PREPATNUC	Sequence 6942	AL080089	GENBANK
Sequence 6893	AC33900	PREPATNUC	Sequence 6943	AL110185	GENBANK
Sequence 6894	AC34235	PREPATNUC	Sequence 6944	AL110191	GENBANK
Sequence 6895	AC34354	PREPATNUC	Sequence 6945	AL122063	GENBANK
Sequence 6896	AC34866	PREPATNUC	Sequence 6946	D14697	GENBANK
Sequence 6897	AC34877	PREPATNUC	Sequence 6947	D16469	GENBANK
Sequence 6898	AB000468	GENBANK	Sequence 6948	D45248	GENBANK
Sequence 6899	AB004788	GENBANK	Sequence 6949	D49396	GENBANK
Sequence 6900	AB007893	GENBANK	Sequence 6950	D50371	GENBANK
Sequence 6901	AB009285	GENBANK	Sequence 6951	D50525	GENBANK
Sequence 6902	AB015644	GENBANK	Sequence 6952	D50916	GENBANK
Sequence 6903	AB016087	GENBANK	Sequence 6953	D87666	GENBANK
Sequence 6904	AF020351	GENBANK	Sequence 6954	D88153	GENBANK
			Sequence 6955	E01915	GENBANK

# Table 3-1

Sequence 6956	J02642	GENBANK	Sequence 7007	AA042813	dbEST
Sequence 6957	J03779	GENBANK	Sequence 7008	AA044697	dbEST
Sequence 6958	J04208	GENBANK	Sequence 7009	AA045753	dbEST
Sequence 6959	L03558	GENBANK	Sequence 7010	AA045879	dbEST
Sequence 6960	L05093	GENBANK	Sequence 7011	AA057541	dbEST
Sequence 6961	L14778	GENBANK	Sequence 7012	AA062804	dbEST
Sequence 6962	L20422	GENBANK	Sequence 7013	AA062928	dbEST
Sequence 6963	M11147	GENBANK	Sequence 7014	AA064627	dbEST
Sequence 6964	M11560	GENBANK	Sequence 7015	AA070911	dbEST
Sequence 6965	M17885	GENBANK	Sequence 7016	AA076077	dbEST
Sequence 6966	M37583	GENBANK	Sequence 7017	AA076593	dbEST
Sequence 6967	M38188	GENBANK	Sequence 7018	AA081815	dbEST
Sequence 6968	M64241	GENBANK	Sequence 7019	AA082502	dbEST
Sequence 6969	U12979	GENBANK	Sequence 7020	AA083481	dbEST
Sequence 6970	U17104	GENBANK	Sequence 7021	AA083794	dbEST
Sequence 6971	U17899	GENBANK	Sequence 7022	AA083868	dbEST
Sequence 6972	U19143	GENBANK	Sequence 7023	AA085603	dbEST
Sequence 6973	U19144	GENBANK	Sequence 7024	AA085824	dbEST
Sequence 6974	U22431	GENBANK	Sequence 7025	AA094583	dbEST
Sequence 6975	U73824	GENBANK	Sequence 7026	AA095753	dbEST
Sequence 6976	U75330	GENBANK	Sequence 7027	AA098801	dbEST
Sequence 6977	X07767	GENBANK	Sequence 7028	AA099023	dbEST
Sequence 6978	X62048	GENBANK	Sequence 7029	AA100987	dbEST
Sequence 6979	X63423	GENBANK	Sequence 7030	AA121390	dbEST
Sequence 6980	X75535	GENBANK	Sequence 7031	AA127493	dbEST
Sequence 6981	X89673	GENBANK	Sequence 7032	AA128952	dbEST
Sequence 6982	X99585	GENBANK	Sequence 7033	AA129726	dbEST
Sequence 6983	Z11692	GENBANK	Sequence 7034	AA130873	dbEST
Sequence 6984	Z19002	GENBANK	Sequence 7035	AA132219	dbEST
Sequence 6985	Z47087	GENBANK	Sequence 7036	AA132574	dbEST
Sequence 6986	Z48054	GENBANK	Sequence 7037	AA132690	dbEST
Sequence 6987	AA001699	dbEST	Sequence 7038	AA133228	dbEST
Sequence 6988	AA004206	dbEST	Sequence 7039	AA133266	dbEST
Sequence 6989	AA005403	dbEST	Sequence 7040	AA135049	dbEST
Sequence 6990	AA009849	dbEST	Sequence 7041	AA136150	dbEST
Sequence 6991	AA010129	dbEST	Sequence 7042	AA136296	dbEST
Sequence 6992	AA016205	dbEST	Sequence 7043	AA147986	dbEST
Sequence 6993	AA018050	dbEST	Sequence 7044	AA149080	dbEST
Sequence 6994	AA025694	dbEST	Sequence 7045	AA150156	dbEST
Sequence 6995	AA027090	dbEST	Sequence 7046	AA150267	dbEST
Sequence 6996	AA029566	dbEST	Sequence 7047	AA150369	dbEST
Sequence 6997	AA031624	dbEST	Sequence 7048	AA150839	dbEST
Sequence 6998	AA031795	dbEST	Sequence 7049	AA150875	dbEST
Sequence 6999	AA033537	dbEST	Sequence 7050	AA152408	dbEST
Sequence 7000	AA039274	dbEST	Sequence 7051	AA156743	dbEST
Sequence 7001	AA039506	dbEST	Sequence 7052	AA157816	dbEST
Sequence 7002	AA039734	dbEST	Sequence 7053	AA158098	dbEST
Sequence 7003	AA039750	dbEST	Sequence 7054	AA159044	dbEST
Sequence 7004	AA039807	dbEST	Sequence 7055	AA160380	dbEST
Sequence 7005	AA040499	dbEST	Sequence 7056	AA164405	dbEST
Sequence 7006	AA040625	dbEST	Sequence 7057	AA165117	dbEST

# Table 3-1

Sequence 7058	AA166853	dbEST	Sequence 7109	AA328061	dbEST
Sequence 7059	AA167011	dbEST	Sequence 7110	AA329553	dbEST
Sequence 7060	AA169493	dbEST	Sequence 7111	AA351201	dbEST
Sequence 7061	AA171618	dbEST	Sequence 7112	AA354420	dbEST
Sequence 7062	AA171706	dbEST	Sequence 7113	AA380769	dbEST
Sequence 7063	AA177062	dbEST	Sequence 7114	AA393336	dbEST
Sequence 7064	AA180137	dbEST	Sequence 7115	AA398256	dbEST
Sequence 7065	AA180817	dbEST	Sequence 7116	AA399238	dbEST
Sequence 7066	AA191045	dbEST	Sequence 7117	AA400658	dbEST
Sequence 7067	AA194429	dbEST	Sequence 7118	AA401237	dbEST
Sequence 7068	AA194535	dbEST	Sequence 7119	AA402330	dbEST
Sequence 7069	AA195470	dbEST	Sequence 7120	AA404535	dbEST
Sequence 7070	AA203462	dbEST	Sequence 7121	AA405929	dbEST
Sequence 7071	AA204856	dbEST	Sequence 7122	AA406122	dbEST
Sequence 7072	AA205858	dbEST	Sequence 7123	AA406404	dbEST
Sequence 7073	AA216133	dbEST	Sequence 7124	AA406565	dbEST
Sequence 7074	AA216211	dbEST	Sequence 7125	AA410640	dbEST
Sequence 7075	AA219582	dbEST	Sequence 7126	AA412229	dbEST
Sequence 7076	AA226340	dbEST	Sequence 7127	AA420563	dbEST
Sequence 7077	AA227105	dbEST	Sequence 7128	AA424175	dbEST
Sequence 7078	AA227695	dbEST	Sequence 7129	AA425389	dbEST
Sequence 7079	AA229607	dbEST	Sequence 7130	AA429036	dbEST
Sequence 7080	AA229611	dbEST	Sequence 7131	AA429457	dbEST
Sequence 7081	AA232686	dbEST	Sequence 7132	AA431401	dbEST
Sequence 7082	AA233053	dbEST	Sequence 7133	AA435877	dbEST
Sequence 7083	AA253254	dbEST	Sequence 7134	AA443357	dbEST
Sequence 7084	AA255502	dbEST	Sequence 7135	AA447559	dbEST
Sequence 7085	AA255529	dbEST	Sequence 7136	AA448542	dbEST
Sequence 7086	AA256507	dbEST	Sequence 7137	AA449663	dbEST
Sequence 7087	AA280381	dbEST	Sequence 7138	AA449891	dbEST
Sequence 7088	AA282837	dbEST	Sequence 7139	AA452722	dbEST
Sequence 7089	AA284506	dbEST	Sequence 7140	AA459869	dbEST
Sequence 7090	AA285089	dbEST	Sequence 7141	AA460777	dbEST
Sequence 7091	AA285290	dbEST	Sequence 7142	AA469432	dbEST
Sequence 7092	AA287721	dbEST	Sequence 7143	AA470662	dbEST
Sequence 7093	AA292273	dbEST	Sequence 7144	AA470829	dbEST
Sequence 7094	AA296152	dbEST	Sequence 7145	AA477597	dbEST
Sequence 7095	AA296237	dbEST	Sequence 7146	AA479363	dbEST
Sequence 7096	AA301795	dbEST	Sequence 7147	AA480202	dbEST
Sequence 7097	AA306372	dbEST	Sequence 7148	AA480226	dbEST
Sequence 7098	AA306982	dbEST	Sequence 7149	AA480863	dbEST
Sequence 7099	AA307814	dbEST	Sequence 7150	AA483013	dbEST
Sequence 7100	AA307908	dbEST	Sequence 7151	AA483289	dbEST
Sequence 7101	AA313647	dbEST	Sequence 7152	AA483857	dbEST
Sequence 7102	AA313693	dbEST	Sequence 7153	AA485065	dbEST
Sequence 7103	AA314391	dbEST	Sequence 7154	AA487463	dbEST
Sequence 7104	AA316788	dbEST	Sequence 7155	AA489074	dbEST
Sequence 7105	AA316962	dbEST	Sequence 7156	AA492038	dbEST
Sequence 7106	AA318100	dbEST	Sequence 7157	AA501447	dbEST
Sequence 7107	AA318712	dbEST	Sequence 7158	AA502178	dbEST
Sequence 7108	AA325594	dbEST	Sequence 7159	AA502730	dbEST

# Table 3-1

Sequence 7160	AA504511	dbEST	Sequence 7211	AA613314	dbEST
Sequence 7161	AA504622	dbEST	Sequence 7212	AA617696	dbEST
Sequence 7162	AA506953	dbEST	Sequence 7213	AA618183	dbEST
Sequence 7163	AA508507	dbEST	Sequence 7214	AA618435	dbEST
Sequence 7164	AA512975	dbEST	Sequence 7215	AA621730	dbEST
Sequence 7165	AA514324	dbEST	Sequence 7216	AA625270	dbEST
Sequence 7166	AA514474	dbEST	Sequence 7217	AA629269	dbEST
Sequence 7167	AA521013	dbEST	Sequence 7218	AA631009	dbEST
Sequence 7168	AA522638	dbEST	Sequence 7219	AA631608	dbEST
Sequence 7169	AA522746	dbEST	Sequence 7220	AA632154	dbEST
Sequence 7170	AA522849	dbEST	Sequence 7221	AA635393	dbEST
Sequence 7171	AA523503	dbEST	Sequence 7222	AA643685	dbEST
Sequence 7172	AA525960	dbEST	Sequence 7223	AA644700	dbEST
Sequence 7173	AA526187	dbEST	Sequence 7224	AA659764	dbEST
Sequence 7174	AA526243	dbEST	Sequence 7225	AA662406	dbEST
Sequence 7175	AA526893	dbEST	Sequence 7226	AA678414	dbEST
Sequence 7176	AA531582	dbEST	Sequence 7227	AA683075	dbEST
Sequence 7177	AA533372	dbEST	Sequence 7228	AA687675	dbEST
Sequence 7178	AA533386	dbEST	Sequence 7229	AA689392	dbEST
Sequence 7179	AA534827	dbEST	Sequence 7230	AA694271	dbEST
Sequence 7180	AA535755	dbEST	Sequence 7231	AA699674	dbEST
Sequence 7181	AA548472	dbEST	Sequence 7232	AA700599	dbEST
Sequence 7182	AA554018	dbEST	Sequence 7233	AA701980	dbEST
Sequence 7183	AA555194	dbEST	Sequence 7234	AA706018	dbEST
Sequence 7184	AA557408	dbEST	Sequence 7235	AA706860	dbEST
Sequence 7185	AA564238	dbEST	Sequence 7236	AA715000	dbEST
Sequence 7186	AA565272	dbEST	Sequence 7237	AA719797	dbEST
Sequence 7187	AA568518	dbEST	Sequence 7238	AA723045	dbEST
Sequence 7188	AA568538	dbEST	Sequence 7239	AA723521	dbEST
Sequence 7189	AA569493	dbEST	Sequence 7240	AA723584	dbEST
Sequence 7190	AA574227	dbEST	Sequence 7241	AA731872	dbEST
Sequence 7191	AA577490	dbEST	Sequence 7242	AA737421	dbEST
Sequence 7192	AA579160	dbEST	Sequence 7243	AA737949	dbEST
Sequence 7193	AA579617	dbEST	Sequence 7244	AA740610	dbEST
Sequence 7194	AA581892	dbEST	Sequence 7245	AA746487	dbEST
Sequence 7195	AA582930	dbEST	Sequence 7246	AA746824	dbEST
Sequence 7196	AA584026	dbEST	Sequence 7247	AA747091	dbEST
Sequence 7197	AA585278	dbEST	Sequence 7248	AA767779	dbEST
Sequence 7198	AA585430	dbEST	Sequence 7249	AA768109	dbEST
Sequence 7199	AA586522	dbEST	Sequence 7250	AA769865	dbEST
Sequence 7200	AA587348	dbEST	Sequence 7251	AA779278	dbEST
Sequence 7201	AA592908	dbEST	Sequence 7252	AA780301	dbEST
Sequence 7202	AA594976	dbEST	Sequence 7253	AA782769	dbEST
Sequence 7203	AA595339	dbEST	Sequence 7254	AA804740	dbEST
Sequence 7204	AA595581	dbEST	Sequence 7255	AA805604	dbEST
Sequence 7205	AA599534	dbEST	Sequence 7256	AA808349	dbEST
Sequence 7206	AA599711	dbEST	Sequence 7257	AA808582	dbEST
Sequence 7207	AA600060	dbEST	Sequence 7258	AA813708	dbEST
Sequence 7208	AA602634	dbEST	Sequence 7259	AA825194	dbEST
Sequence 7209	AA602758	dbEST	Sequence 7260	AA827738	dbEST
Sequence 7210	AA604815	dbEST	Sequence 7261	AA827816	dbEST

09760027 012401

# Table 3-1

Sequence 7262	AA829850	dbEST	Sequence 7313	AI074107	dbEST
Sequence 7263	AA829973	dbEST	Sequence 7314	AI076593	dbEST
Sequence 7264	AA830635	dbEST	Sequence 7315	AI077317	dbEST
Sequence 7265	AA835708	dbEST	Sequence 7316	AI081842	dbEST
Sequence 7266	AA836233	dbEST	Sequence 7317	AI081918	dbEST
Sequence 7267	AA836306	dbEST	Sequence 7318	AI085195	dbEST
Sequence 7268	AA836962	dbEST	Sequence 7319	AI087077	dbEST
Sequence 7269	AA837401	dbEST	Sequence 7320	AI087287	dbEST
Sequence 7270	AA845575	dbEST	Sequence 7321	AI091935	dbEST
Sequence 7271	AA846308	dbEST	Sequence 7322	AI093409	dbEST
Sequence 7272	AA846626	dbEST	Sequence 7323	AI097545	dbEST
Sequence 7273	AA847348	dbEST	Sequence 7324	AI114631	dbEST
Sequence 7274	AA852908	dbEST	Sequence 7325	AI123229	dbEST
Sequence 7275	AA864406	dbEST	Sequence 7326	AI125607	dbEST
Sequence 7276	AA865913	dbEST	Sequence 7327	AI131097	dbEST
Sequence 7277	AA866035	dbEST	Sequence 7328	AI138629	dbEST
Sequence 7278	AA872969	dbEST	Sequence 7329	AI139904	dbEST
Sequence 7279	AA876384	dbEST	Sequence 7330	AI144216	dbEST
Sequence 7280	AA876730	dbEST	Sequence 7331	AI147191	dbEST
Sequence 7281	AA886406	dbEST	Sequence 7332	AI174867	dbEST
Sequence 7282	AA887224	dbEST	Sequence 7333	AI183897	dbEST
Sequence 7283	AA894408	dbEST	Sequence 7334	AI184113	dbEST
Sequence 7284	AA912233	dbEST	Sequence 7335	AI208430	dbEST
Sequence 7285	AA916635	dbEST	Sequence 7336	AI214050	dbEST
Sequence 7286	AA936792	dbEST	Sequence 7337	AI217019	dbEST
Sequence 7287	AA960820	dbEST	Sequence 7338	AI217557	dbEST
Sequence 7288	AA974826	dbEST	Sequence 7339	AI222506	dbEST
Sequence 7289	AA994034	dbEST	Sequence 7340	AI240543	dbEST
Sequence 7290	AA994694	dbEST	Sequence 7341	AI241893	dbEST
Sequence 7291	AI002321	dbEST	Sequence 7342	AI246173	dbEST
Sequence 7292	AI016106	dbEST	Sequence 7343	AI249257	dbEST
Sequence 7293	AI017779	dbEST	Sequence 7344	AI249877	dbEST
Sequence 7294	AI017809	dbEST	Sequence 7345	AI252562	dbEST
Sequence 7295	AI018161	dbEST	Sequence 7346	AI262104	dbEST
Sequence 7296	AI018686	dbEST	Sequence 7347	AI262460	dbEST
Sequence 7297	AI028107	dbEST	Sequence 7348	AI263731	dbEST
Sequence 7298	AI032779	dbEST	Sequence 7349	AI266643	dbEST
Sequence 7299	AI033863	dbEST	Sequence 7350	AI271269	dbEST
Sequence 7300	AI039433	dbEST	Sequence 7351	AI275175	dbEST
Sequence 7301	AI039804	dbEST	Sequence 7352	AI280561	dbEST
Sequence 7302	AI041630	dbEST	Sequence 7353	AI281777	dbEST
Sequence 7303	AI042066	dbEST	Sequence 7354	AI283385	dbEST
Sequence 7304	AI042354	dbEST	Sequence 7355	AI301933	dbEST
Sequence 7305	AI051210	dbEST	Sequence 7356	AI302526	dbEST
Sequence 7306	AI051983	dbEST	Sequence 7357	AI305530	dbEST
Sequence 7307	AI051994	dbEST	Sequence 7358	AI306421	dbEST
Sequence 7308	AI053744	dbEST	Sequence 7359	AI309025	dbEST
Sequence 7309	AI054344	dbEST	Sequence 7360	AI309843	dbEST
Sequence 7310	AI056927	dbEST	Sequence 7361	AI310484	dbEST
Sequence 7311	AI057585	dbEST	Sequence 7362	AI338222	dbEST
Sequence 7312	AI066753	dbEST	Sequence 7363	AI340533	dbEST



# Table 3-1

Sequence 7364	AI340627	dbEST	Sequence 7415	AI630345	dbEST
Sequence 7365	AI345347	dbEST	Sequence 7416	AI630891	dbEST
Sequence 7366	AI345370	dbEST	Sequence 7417	AI635478	dbEST
Sequence 7367	AI345478	dbEST	Sequence 7418	AI636626	dbEST
Sequence 7368	AI347461	dbEST	Sequence 7419	AI637584	dbEST
Sequence 7369	AI349256	dbEST	Sequence 7420	AI653541	dbEST
Sequence 7370	AI357779	dbEST	Sequence 7421	AI656402	dbEST
Sequence 7371	AI360123	dbEST	Sequence 7422	AI659386	dbEST
Sequence 7372	AI363118	dbEST	Sequence 7423	AI670009	dbEST
Sequence 7373	AI364592	dbEST	Sequence 7424	AI671642	dbEST
Sequence 7374	AI367730	dbEST	Sequence 7425	AI687362	dbEST
Sequence 7375	AI373565	dbEST	Sequence 7426	AI696693	dbEST
Sequence 7376	AI375751	dbEST	Sequence 7427	AI698092	dbEST
Sequence 7377	AI394420	dbEST	Sequence 7428	AI720132	dbEST
Sequence 7378	AI394469	dbEST	Sequence 7429	AI741446	dbEST
Sequence 7379	AI400282	dbEST	Sequence 7430	AI741861	dbEST
Sequence 7380	AI401513	dbEST	Sequence 7431	AI745218	dbEST
Sequence 7381	AI420373	dbEST	Sequence 7432	AI753459	dbEST
Sequence 7382	AI421290	dbEST	Sequence 7433	AI796562	dbEST
Sequence 7383	AI421401	dbEST	Sequence 7434	AI799699	dbEST
Sequence 7384	AI431327	dbEST	Sequence 7435	AI801589	dbEST
Sequence 7385	AI431923	dbEST	Sequence 7436	AI802542	dbEST
Sequence 7386	AI434109	dbEST	Sequence 7437	AI811144	dbEST
Sequence 7387	AI434949	dbEST	Sequence 7438	AI826427	dbEST
Sequence 7388	AI439452	dbEST	Sequence 7439	AI827129	dbEST
Sequence 7389	AI440238	dbEST	Sequence 7440	AI827550	dbEST
Sequence 7390	AI446003	dbEST	Sequence 7441	AI832609	dbEST
Sequence 7391	AI446426	dbEST	Sequence 7442	AI866551	dbEST
Sequence 7392	AI453477	dbEST	Sequence 7443	AI913323	dbEST
Sequence 7393	AI457107	dbEST	Sequence 7444	AI916374	dbEST
Sequence 7394	AI457410	dbEST	Sequence 7445	AI916419	dbEST
Sequence 7395	AI458799	dbEST	Sequence 7446	AI921254	dbEST
Sequence 7396	AI472566	dbEST	Sequence 7447	AI922114	dbEST
Sequence 7397	AI476075	dbEST	Sequence 7448	AI923485	dbEST
Sequence 7398	AI492953	dbEST	Sequence 7449	AI928889	dbEST
Sequence 7399	AI497636	dbEST	Sequence 7450	AI932951	dbEST
Sequence 7400	AI499584	dbEST	Sequence 7451	AI937150	dbEST
Sequence 7401	AI523964	dbEST	Sequence 7452	AI954406	dbEST
Sequence 7402	AI524304	dbEST	Sequence 7453	AI961592	dbEST
Sequence 7403	AI537244	dbEST	Sequence 7454	AI968311	dbEST
Sequence 7404	AI538342	dbEST	Sequence 7455	AL036165	dbEST
Sequence 7405	AI557082	dbEST	Sequence 7456	AL036575	dbEST
Sequence 7406	AI560184	dbEST	Sequence 7457	AL037646	dbEST
Sequence 7407	AI560756	dbEST	Sequence 7458	AL043071	dbEST
Sequence 7408	AI570521	dbEST	Sequence 7459	AL045040	dbEST
Sequence 7409	AI572096	dbEST	Sequence 7460	AL045500	dbEST
Sequence 7410	AI573218	dbEST	Sequence 7461	AL046648	dbEST
Sequence 7411	AI582912	dbEST	Sequence 7462	AL110384	dbEST
Sequence 7412	AI583257	dbEST	Sequence 7463	AL119319	dbEST
Sequence 7413	AI611738	dbEST	Sequence 7464	AW009700	dbEST
Sequence 7414	AI625204	dbEST	Sequence 7465	AW009886	dbEST

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Sequence 7466	AW015024	dbEST
Sequence 7467	AW016443	dbEST
Sequence 7468	AW016546	dbEST
Sequence 7469	AW020245	dbEST
Sequence 7470	AW021402	dbEST
Sequence 7471	AW023884	dbEST
Sequence 7472	AW025130	dbEST
Sequence 7473	AW043908	dbEST
Sequence 7474	AW075324	dbEST
Sequence 7475	AW079132	dbEST
Sequence 7476	AW080456	dbEST
Sequence 7477	AW084350	dbEST
Sequence 7478	AW084663	dbEST
Sequence 7479	AW117855	dbEST
Sequence 7480	AW130776	dbEST
Sequence 7481	AW149504	dbEST
Sequence 7482	AW161853	dbEST
Sequence 7483	AW167569	dbEST
Sequence 7484	AW169156	dbEST
Sequence 7485	AW183848	dbEST
Sequence 7486	D52802	dbEST
Sequence 7487	D55565	dbEST
Sequence 7488	F28764	dbEST
Sequence 7489	H47715	dbEST
Sequence 7490	H48257	dbEST
Sequence 7491	H69070	dbEST
Sequence 7492	H93650	dbEST
Sequence 7493	N30570	dbEST
Sequence 7494	N31301	dbEST
Sequence 7495	N75979	dbEST
Sequence 7496	R48046	dbEST
Sequence 7497	W05661	dbEST
Sequence 7498	W35236	dbEST
Sequence 7499	W37602	dbEST
Sequence 7500	W73817	dbEST
Sequence 7501	W79668	dbEST
Sequence 7502	W79717	dbEST
Sequence 7503	Q65520	NUCPATENT
Sequence 7504	V05728	NUCPATENT
Sequence 7505	V63195	NUCPATENT
Sequence 7506	X00656	NUCPATENT
Sequence 7507	X08687	NUCPATENT
Sequence 7508	X24921	NUCPATENT
Sequence 7509	X27427	NUCPATENT
Sequence 7510	X85038	NUCPATENT
Sequence 7511	X89652	NUCPATENT

Table 3-2

## Sequence 1240

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGAGAGTGTTCC  
CAGACAGAAGAAATAGCAAGTGCCGAGAAAGCTGGCATCAGAAAAACAGAGGGGAGATTTG  
TGTGGCTGCAGCCGAGGGAGACCAGGAAGATCTGCATGGTGGGAAGGACCTGATGATACA  
GAGGTGAGAAATAAGAAAGGCTGCTGACTTTACCATCTGAGGCCACACATCTGCTGAAAT  
GGAGATAATTAACATCACTAGAAACAGCAAGATGACAATATAATGTCTAAGTAGTGACAT  
GTTTTTGACATTTCCAGCCCCCTTTAAATNTCCACACACACAGGAAGCACAAAAGGAAGC  
ACAGAGATCCTGGGAGAAATGCCCGGCCCGCTCTA

## Sequence 2802

CCGCGGTGGCGGCCGAGGTNCCAANGTCAAGTCACCATAATGTNTTTNACCTGTTTCACA  
ATGTTCTACATTATCGTGGAATGTTGACAAGGTCTCNAGCAAAGACTGGATCTNCANTG  
GNTTTAAATACAATNNTCCATTTTCGGAAATTGANGGAAAAAGATCTTTNNCAANCTGGA  
AGAGTCTTCTTGTAATAGGAATCACNGGGCTACACCTGCTGACGACCTTGGGTTTN

## Sequence 2803

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATATGGACACCAACATGG  
AGCANAAATGAGGGCAGCAGTGCCAATCTCATTCCAGGTGAGAAGTTGCACAGTGTC  
AATAGGTGCATACATCTCCTTAGTAAGTAGTTGTGATTAACAATGAAATAGAAATGAAAA  
ATATATTTTTTTTATTTATGTGTATTATATTTTTCAAGCAGCTAATAAGTTGGTAGGACAT  
AATATTTAATTCGTTGGGGACCTAATTATTTATAAATTGAATGGTTAGATATTTCTTTTG  
GCCTAAGCCACCATGAAAAATCACTGAGGCGCTAAGGGAAACATGAACTAAGAAGCCCT  
TCTGAGTCTCTGTTTTCTCAACTGTAAGATGAANAAACCTGCTCCACCTTCTCTTGCGA  
TTGGTGAACGGCAGTTTGAGATACTGCGCAGAATGGACCTTAT

## Sequence 2804

GGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGGTTGTATGTGGGTTGGCATTCTTGC  
ATGATGGGAGTGGCCACCTGCTTTTCATATTCTGAAGTCAGAGTGTTCCAGACAGAAGAAA  
TAGCAAGTGCCGAGAAGCTGGCATCAGAAAAACAGAGGGGAGATTTGTGTGGCTGCAGCC  
GAGGGAGACCAGGAAGATCTGCATGGTGGGAAGGACCTGATGATACAGAGGTGAGAAATA  
AGAAAGGCTGCTGACTTTACCATCTGAGGCCACACATCTGCTGAAATGGAGATAATTAAC  
ATCACTAGAAACAGCAAGATGACAATATAATGTCTAANTAGTGACATGTTTTTTGCACAT  
TTCCAGCCCCCTTTAAATATCCACACACACAGGAAGCACAAAAGGAAGCACAGAGATCCCT  
GGGAGAAATGCCCG

## Sequence 2805

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCATGGTACGCGGGGAGG  
TGTTGTTCCGTGAATCAGCACATCAATTGCAGCATTGTGGCTACCAGGGGGTCAGGATGC  
GGNCGGTGGAGCCCTCTGGCCTTTGTGTGGTAGCCGAGGACTCTGTGTGAGCTGACCGTT  
TTCCGGNAACTTTCTGTGCGAGACTCACATCTTGAAATTCAAATACTCAATANCTCTCG  
AATTCTAGGAATCTTGAGAAGAGGCCTGGATTAANGATTACANACATGGGCCCTNANATNG  
NTATGGCATTGCTGGTTCTACCAACGTGACAG

## Sequence 4710

CCGGGCAGGTACCAGAACTTCAGCAAAGGAAGCAGACACAGGTCCGAGGAAGCCTACATA  
GACCCCATTGCCATGGAGTATTACAACCTGGGGGCGGTTCTCGAAGCCCCCAGAAGATGAT  
GATGCCAATTCCTACGAGAATGTGCTCATTTGCAAGCAGAAAACCACAGAGACAGGTGCC  
CAGCAGGAGGGCATAGGTGGCCTCTGCAGAGGGGACCTCAGCCTGTCACTGGCCCTGAAG  
ACTGGCCCCACTTCTGGTCTCTGTCCCCCTGCCTCCCCGGAAGAAGATGAGGAATCTGAG  
GATTATCAGAACTCAGCATCCATCCATCAGTGGCAGGATCCAGGAAG

## Sequence 4711

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTTT  
TTTTGGACCTTGGGTATCTTCTGCAGGTCAAGCCATCTGACCACTCTGAGAACTTACCC  
AGGGTGACTCANCTGTCACTCCAGGTCACTCATAAGCCCAACGGGTAGCTCCACCCGTGG  
ACAGCTGG

## Sequence 4712

CGCGGTGGCGGCCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTAAG  
GGAACGTGAATTTTAATGAGGGGGCANACCGAGGAGGTGGTGGCTGCCCGGAGATCAGGG  
CCAGGCTGTGCTANATGGCNCCTGGAAGGGGGGTCAACCAAGTCTCCCTGCTATCATTTT  
AGGAGGCCGACCCAAGTCTCCCTGCTGTCAATTCAGGAGGCCGAATTTTTCCCGATCCC  
ANAGAAGGTGTCAAAGGCCTGGTTAGCANTCTTGTGCGATGGTTTCTGGGTGGTCTTGGC  
CANCTGGTCCATGGCTTTCTGCCCCGCTCTGTGGCCTGGTCCACCACTTGCTGANCTGC

Table 3-2

CGCTCCGGCCCCGCTNACACGGCTTCCTGGGCGGTCCCCTCCACCTGTTGCTTCAGGTCCCT  
GCAAGCCCTTGCTTGCCATGGCTTCGGGGTATCTGTGGAGTCNTCAAGANCANCTGGAGC  
CACNTTGATCCTNCCCCAAGTGGCCCCCGGTACCTTGGCCCGTNTAAACTATGTGGA  
ATCCCCCGGCTGCANGAATTCATATCAAAGCTTATNGATACCCGGCGACCCTCGAGG  
GGG

Sequence 4713

CCGCGGTGGCGGCCGAGGTACGCGGGGTCACTACTACAGGAAAACTGTTCTCTTCTGTG  
GCACAGAGAACCCTGCTTCAAAGCAGAAGTAGCAGTTCCGGAGTCCAGCTGGCTAAACT  
CATCCCAGAGGATAATGGCAACCCATGCCCTAGAAATCGCTGGGCTGTTTCTTGGTGGTG  
TTGGAATGGTGGGCACAGTGGCTGTCACTGTCACTGCCTCAGTGGAGAGTGTGGCCTTCA  
TTGAAAACAACATCGTGGTTTTTTGAAACTTCTGGGAAGGACTGTGGATGAATTGCGTGA  
GGCAGGCTAACATCAGGATGCAGTTGCAAAATCTATGATTCCCTGCTGGCTCTTTCTCCG  
GACCTACAGGCAGCCAGAGGACTGATGTTGCGCTGCTTCCGTGATGTCCTTCTTGGCTTT  
CATGATGGC

Sequence 4714

CGCTGATGTTGGCCANGCGAGAGGGCCACGTTCTCTGAGTGTTCAGAAGGGTCTTACAG  
ACGTCCAGGGGGGTCTGTGGCGGCCGCGGGCAGGGGCCCGCCAGCCCGCTGAGATGATG  
TGGGACTGCGGGTGTAGGTCCGGTGGGGGTGACCTGCTCCTGCAGGAACCTCATAGGTG  
ATGAAGTGGATGGACTGGAAGGGGATGTTTCATGGTCAGCTGCGTGGTGTAGCTCCGGTAG  
AAGGCCCCCAACCCCTNGGTCTCCACACCGTCCGGATGCAACTGATTGCTGACCGGTGC  
TGCNAGTTGTACCTGCCCGGGCGGCCGCTCTAGAACTA

Sequence 4715

GCCGCCGGGCAGGTACAACTTAGAAGAAAATNGGAAGATAGAAACAAGATAGAAAATGA  
AAATATTGTCAAGAGTTTCAGATAGAAAATGAAAAACAAGCTAAGACAAGTATTGGAGAA  
GTATAGAAGATAGAAAAATATAAAGCCAAAAATTGGATAAAATAGCACTGAAAAATGAG  
GAAATTATTGGTAACCAATTTATTTTAAAGCCCATCAATTTAATTTCTGGTGGTGCAGA  
AGTTAGAAGGTAAAGCTTGAGAAGATGAGGGTGTTCACCGTAGACCNGAACCAATTTAGA  
AGAATACTTGAAGCTAGAAGGGGAAGTTGGTTAAAAATCACATCAAAAAGCTACTAAAAG  
GACTGGTGTAAATTTAAAAAAAATAAGGCAGAAGGCTTTTGAAGAAGTTAGAAGAATT  
TGGAAGGCCTTAAATATAGTAGCTTAATTTGAAAAAATGTGAAGGACCTTTCGTAACCGG  
AAGGTNATTTCAAGATNAAAGAAGTAATTTACCAACCTTAATGGTTTTTGCCTTTGGGGC  
TTTTGAGTTTAAAGAATTANT

Sequence 4716

GAATNGGAGCTCCCCGCGGTGGCGGCCGANGNACTCNGGANAGAGTANAAACGTTTCCAT  
GTTATTTCTGCAGTTGTNGACTTAGGCTTATTTGTAAAGAAGCATGCTCCATTGACTGCC  
ATCTCTAGTCTTGCAGTGGGTGGTATTAAACCATAGAAAGCAAGCAGTTGTGTATCACAT  
ACACAATGGNTATGATGNTAACCANACTGTTTNGTTGTTTCATTCTGNTATATGTTTT  
GTGATANGGATGTTGGGAGCACAGCTCTATTCTGCCTGCTCAGACTTAAGTTAGACCCTT  
ATCTTTTATATTATGTCATGAAAAAAGTCTCCTAAAAATTGTGAACTAGCCTCTTGATG  
AGTGATG

Sequence 4717

CCGCGGTGGCGGCCCGAGGTACATGGCCACAAGAGGAGCCCTGGCCAACAGTTTCAGGCT  
GGCCATCTTGGGCTGGGGCTCCCTGGGCTTGCACTGGGGAGGGTCAGGATTCAAATTCTG  
GGTGACAATTTAGTAGCACCAAGACCAGAAGACAGTGAGGCCACGCTGGGGAGTGGGGG  
AGTGCTTGTATGTGGGATGCATGGAGGGAGGCTGCAGTATGTGGAGGAGAAAGAGAGGCT  
GTTGTGGGCTGGTTCTTAAGACACTCAAGGGGACTCAAAGGGTCGGCTCCAGCCATGGAC  
ACTATCTAAGGCTGCTCAGAGGAGAAATGCTGGAGGAGAGGAAGAGGAAGTGAATGGTGT  
GAGAACATTCTTACCCCTATAAATAAACTATTTACACACTTTAAGAAAAGGAGAGCCGGC  
TCTCAGTCCCGCTACCTGCCCCGGCGGCCGCTCTAGAACTA

Sequence 4718

CCGCGGTGGCGGCCGAGGTACGCGGGGACCTCAGCCCAGCAATTGTTTTGGAGCATGTGA  
ACACCTTGAGCCTTGATGAGTTCCAGTATGTGGTATATTATGCAGAGCATTGAGAGCAA  
TACTCTCTCTCCGAGCGCTTAATCCGAACAATTGCTGCCATCCGTTTCTTCCCACATGAT  
AATGTAGAGGACCTCATCAGAGGGGGAGCAGATGTGAAGTGCACCTCATGGCACACTGAAG  
CCCTTGCACTGTGCCTGTATGGTGTGATGCTGACTGTGTGGAGTTACTTCTGGAAAAA  
GGAGCCGAGGTGAATGCCCTGGATGGGTATAACCCGAACAGCCCTCCACTATGCANCAGA  
GAAAGATGAGGCTTGTGTGGAGGTCCTATTGGAGTATGGTGCAACCCCAATGCTTTGGA

Table 3-2

TGGCAACAGAGATACCCCACTTCAC TGGGTAGCCTTTAAGAACAATGCTGAGTGTGTCG  
GGCTCTCCTAGAGAGCGGGGCCCTCTGTCAATGCCCTGGA

Sequence 4719

AAATCCGGCGAATNGTTTCTNCACGCGGTGGCGGNCGCCCGGGCAGGTACNCGGGTATG  
CTGCCTGGACACACGCAGATTTNCTGTCTANTCACACACACACGCAGACATGCTGTCCGG  
ACACACACACGCATGCACAGATATGCTGTCCGGACACACACACGCACGCANATATGCTTG  
CCTGGACACACACAGATAATGCTGCCTCAACACTCACACACGTGCAGATATTGCCTGG  
ACACACACATGTGCACAGATATGCTGTCTGGACATGCACACACCGTGCAGATATGCTGTC  
CGGATACACACGCACGCACACATGCAGATATGCTGCCTGGGCACACACTTTCGGACACAC  
ATGCACACACAGGTGCAGATATTGCTGCCTGGACACACGCAGACTGNACGTGCTTTTGGG  
AG

Sequence 4720

AGGAGTGCAGAACCCTGTANCCCGCTGCATCATGTGCTGTTTCAAGNGCTGCCTCTGGTG  
TCTGGAAAAATTTATCAAGTTCCCTAAACCNCAATGCATACATCATGATCGCCATCTNCGG  
GAAGAATTTNTGTGTCTCAGCCAAAAACGCGTTTCATGCTNCTCATGCGAAACATTGTGAG  
GGNGGTCTGCTGGACAAAGTCACAGACCTGCTGNTGTTCTTTGGGAAGCTGCTGGTGGT  
CGGAGGCGTGGGGGTCTGTCTTCTTTTTTCTCCGGTTCGCATNCCGGGGCTGGGATA  
AAGACTTTAANAGCCCCACCTNAACTATTACTGGCTGCCCCATCATGACCCTNCANTCC

Sequence 4721

CGCCCGGGCAGGTACATTCTCATCATTAGGATTGGTTGTTGCTGTCTTGACAACTGGT  
TAAGGAAAAATGAATTATTCTGTAATTTCTGAAGAATCCAAATCCTGTCTCTTATAAAGT  
CAGAACAGAAGGGGGGAAAAGGTGGTGGTGAGCATCAAGAGAGAAAAAAGGAGAAAAATTA  
TTTACAGAAAATAGGAGACANGAGGGAGTGTCCGCAAGAAAAGACTTCATTGTCACTTCT  
TCTTGCCGGCCCTCTTGGCACTGGACTTTGCTTTGGGTTTCACTGGTTTGGCCTTTTGG  
GCTTGGATGCCTTTGACCGGCTTGGCTTTGACAGTCTTGGGTTTTTTTGGCNTTCTTGGG  
CGTGGCAGCCAAGCTTCTTCTTGGCCTTCTTGACCCGGGTGGCTTTNGGTTTTCTTTGG  
NTTGGGGG

Sequence 4722

GGTGGCGGCGGAGGTACCTCAAAAGTGGGGAAATCCCCATATAACTGANGACGAAGGCAG  
TTCAGAAGTTCATTGATTTGCCCTAAGGTTCCCTCAATTTGCAAACGTCAGGCCAATGATC  
CAACCCAGGTATGTTTGGCAGTGAAGGACCAGTTGAGTCATAGCTGCAAGTAACCAACC  
TGCAGTGGTCCCTATCTTGGCCGTTAGCTTACATTGACATTTAACTCAAATTTACTCA  
GTAACACACAGCTATCATGTTTTCCACTAAAACCTCCACAGCATTCTGGCAACTTTTCTATT  
TTAGAGCAATAAAGTAAATTGTTAGCATCCCTTTGACATATAAATATTTCTACAAATAGT  
AATTCTCTAGCCATTCAATTTGGAGTATTTAAAACCTCAACATTCATAGCACATTTTATGGT  
GACAAAGAACTTATGTTTCAAGACACAAAAAATAAGTCGTACCTGCCCCGGGCGGGCGGTCT  
TNGAAGTAGTG

Sequence 4723

ACAAAAACCAATCTACCTGATGAAAACCTCCGTTCCCTTCTCGCCAGAAACATAAAATGCG  
ATGGAGCTACGGCCACCGCTGCCGAGACAAAATGGCGCCGACCCCCGCGTACCT

Sequence 6889

GAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTTTCTCCGGTTCGCATCC  
CGGGGCTGGGTAAAGACTTTAAGAGCCCCCACCTCAACTATTACTGGCTGCCCATCATGA  
CCTCCATCCTGGGGGCTATGTCATCGCCAGCGGCTTTTTTTCAGCGGTTTTTCGGCATGTG  
TGTGGACACGCCCTTCTCTGCTTCTTGAAGACCTGGAGCGGAACAACGGCTCCCTGGA  
CCGGCCCTACTACATGTCCAAGAGCCTTCTAAAGATTCTGGGCAAGAAGAACGAGGCGCC  
CCCGGACAACAAGAAGAGGAAGGAAGTGACAGCTCCGGCCCTGATCCAGGACTGCACCCC  
ACCCCCACCGTCCAGCCATTCAACCTTACTTCGCCTTACAGGGTC

Sequence 6890

CTCACTATAGGGCGAATTGGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACTATA  
TGGACACCAACATGGAGCAGAAAATGAGGGCAGCAGTGTCCAATCTCATTCCAGGTGAGA  
AGTTGCACAGTGTCCAATAGGTGCATACATCTCCTTAGTAAGTAGTTGTGATTAACAATG  
AAATAGAAATGAAAAATATATTTTTTTATTTATGTGATTATATTTTTCAAGCAGCTAAT  
AAGTTGGTAGGACATAATATTTAATTCGTTGGGGACCTAATTATTTATAAATTGAATGGT  
TAGATATTTCTTTTGGCCTAAGCCACCATGAAAAAATCACTGAGGCGCTAAGGGAAACAT  
GAACTAAGAAGCCCTTCTGAGTCTCTGTTTTCTCAACTGTAAGATGAAGAAACCTACTCC  
ACCTTCTCTTGGCATTGTTGAACGGCAGTTGAGATACTGCGCAGAATGGGACCTTATTG

Table 3-2

ATGGCCTACCCAACATCCATTCTCTACTCCCTCTACTCTGATGGCACCCG

Sequence 6891

CCGCGGTGGCGGCCGAGGTACGCGGGGTTTTTCAGGGTCGTAGGACGCCGTTGGGCACCAC  
GCTCGGAGAAGGACAGGACAATGGCGGCCTTAGGGTCCCCGTCGCACACTTTTCGAGGAC  
TTCTGCGGGAGTTGCGCTACCTGAGCGCGGCCACCGGCCGCTCTAGAACTAAGTGGATCC  
CCCCGGCTTGCANGA

Sequence 6892

CTCCCCGCGGTGGCGGCCGAGGTACGCGGGGCTCTATATAAGTGGGCAGNGGCCGNGACT  
GCGCGCAGACACTGACCTTCAGCGCCTNGGCTCCAGCGCCATGGCGCCCTCCAGGAAGTT  
CTTCGTTGGGGGAACTGGAAGATGAACGGACGGAAGCAGANTCTGGGGGAGCTCATCGG  
CACTCTNAACGCGGCCAA

Sequence 6893

CCACCGCGGTGGCGGCCGAGGTACAGTGGCACCTGGGAAAAGGCACCTGGAAGGTTTCCA  
TGTGGCCCAGCCCAGCATGGAAGCAGGGTGGGAACTCTGCTGTGTGCCAGCGCTCACTC  
TACTCGAGTGGCTTTTTGAAAGCCCTACCATGTCTGTGTGTCAGGCCTGTGCTGCTTCACAT  
CCTACAGCTGCCTAGGAAAGGCCGCCACGCTCCCTGTCCACACACTCCCTGTCCACACA  
CTCCCTGTCCACACACTCCCTGTCCACAACCTGCAGCCGGGCCCTCTGCCTATGGGCACCC  
AATCCAAGCAGCTGCTCCACCTTTGTTTGGCATGGTGATTGTGTTTTTCTCTTGGCGC  
TTATGTGTGTGGGCTTGGGACGAAGTGCTGGTATGCACCTAGGACCTTCTTGATAGCTCC  
CTGCACCTTTGGAACACGGAGCAAATGAAAAAAGGGTCGGGGCTTGCCCTCCACCTTGGAC  
TTGGAAGAAGCCACATTGGAGANGTGAAGGACCCCATGGTGGCTCTAGTGGGAAAATAC  
GTTAGCCTCAANCTNAGGANGGATGAGGCCAACCCCAANAGGGAGACCTTAATTGATAGG  
GGATCANGCTAAAAAATGG

Sequence 6894

AGGTACTCGCGCTGTTCTTCTGTTATCATCCAGGGTTCGTCGGGGTAACTGCTGTTATCC  
TGTAAGTTCCCTCTCCACTGAAAAAGACCGGATAAGGGAAGCCTGATGCCGAAGGGGCTTG  
GTTCTTGGGCCCCCTGATGAGGATCCCTCGGGCTGGACAAGGGGCTGCCTAGCTTCATAA  
GGTGCTGGATGCATCTGTTCTGCGTTGCTCCGCAGTTTGCTGTAGCCATGGCTCAAGGGC  
ACCTCTGGTAATGAGGCGGGGAAGAAGGAGGGGAGGCGAGGGGTGACATCGTGGGAGAC  
TGTGTTTCTGCTGTTTATCCTCATCGTCCATTCTTTGAAGGAATTTT

Sequence 6895

CCGCGGTGGCGGCCCGGGCAGGTACGCGGGGATTGTGGCAGCTGGAGGTCTCTGCAT  
CGCTTATCCGTTTATTAGCCGGACCAAGATTGCACAGCTAAAGTCTGGCAGAGACTCCAC  
GGTATGACTGTCTCACTGGGCCTGTCCACAGTGCGAGCGACTCCTGAGGGGAACAGCGC  
CGGAGTTCAAGGAGTCCAAGCACAAAGCGGTCTTTTACATTCCAACCTGTTGCCTGCCAGC  
CCTTCTGGATTACTGATAGAAAATCATGCAAAACCTCCCAACCTTTCTAAGGACAAGAC  
TACTGTGGATTCAAGTGCTTTAATGACTATTTATGCGTTGACTGTGAGAATAGGGAGCAG  
NGCCATGGGACATTTCTAGGTGTAGAGAAAGAAGAACTGCAATGGAAAAATTTGTATGA  
TTTCCATTTATTC

Sequence 6896

CCGCGGTGGCGGCCGAGGTACAGTGGTTAATTTGTCACAACCTGACTGAGGCATCACAACA  
ACAGCAGCAGTCACCACTACAAGAACAAGCACAGACTTTACAGCAGCAGATTTTCATCAAA  
TATTTTCCATCACCAATAGTAACAACATGCCTGGAATTCAAGGAGCCACATCTTCGCC  
TTCAACCACAGGCTACTTTTATTTACAACACAGCAGGAGGCACAATGAACCAACTGCAG  
AATTCTCCTGGCTCATCTCAGCAGACATCAGGAATGTTCTTATTGGCATTCAAATAAC  
TGTAAGTCAGCTTTTAACCTCTGGACCAGCTACATTGCCTGATCAGTTGATGGCCATAAGT  
CAGCCAGGCCAACCAAAAACGAGGGCCAGCCACCTGTGACAACACTTCTTTCTCAGCAA  
ATGCCAGAGAATTTCTCACTGGCATCCTCTATAAACACCAACCAGAACATCGAAAAGATT

Sequence 6897

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTCTGGTCA  
TCTTCGTTGTTTTGGTTCGTGCAAGGTGTTAACTATTTTCACTTCCCATATCACAAGTTA  
GTCCACAGGAGGAGCTGGTGGATCTTGTCATTATGAGGACTGGTTGGCTTTCCAGGTAG  
GCTGGATCCTNTTAGATTAGGAGGGTCTCAGTAAGAACAGGATCAATGCAATAACCATCC  
AGGCTACCAAGATNATTGTAACACTGATGCCNTTATNACCAGAGGGTCCCGGTAATTNCT  
GAANACACTCTGTGTCTGTGCAGTATGATTGGGACTGCCGTANCANATTGNTCAGTCTTC  
TCANTGCATNGTTTCATGAGAGCAAAACACATTNACAGGGATCAAATTCACCTTCTTGC  
CCATTATTACCCAGCTTGGATTTTTACTTGGACCTNTTTTTAAATCCCNCC

**Table 3-3**

<b>Sequence #</b>	<b>Acc No</b>	<b>Database hit</b>	<b>GI Number</b>
Sequence 7512	A14133	Genbank	490127
Sequence 7513	A26481	Genbank	1247452
Sequence 7514	A26595	Genbank	1247460
Sequence 7515	A29216	Genbank	1247528
Sequence 7516	A33292	Genbank	1567852
Sequence 7517	A36460	Genbank	2293778
Sequence 7518	A43521	Genbank	2298710
Sequence 7519	A58331	Genbank	3713993
Sequence 7520	A80239	Genbank	6092971
Sequence 7521	A81324	Genbank	6731650
Sequence 7522	A98295	Genbank	6781400
Sequence 7523	AB000360	Genbank	2547041
Sequence 7524	AB000468	Genbank	1843400
Sequence 7525	AB000516	Genbank	2723379
Sequence 7526	AB000584	Genbank	1813326
Sequence 7527	AB000624	Genbank	5748486
Sequence 7528	AB000889	Genbank	2467299
Sequence 7529	AB001523	Genbank	2244605
Sequence 7530	AB001601	Genbank	3107912
Sequence 7531	AB002292	Genbank	2224528
Sequence 7532	AB002293	Genbank	2224530
Sequence 7533	AB002299	Genbank	2224542
Sequence 7534	AB002310	Genbank	2224564
Sequence 7535	AB002313	Genbank	2280475
Sequence 7536	AB002323	Genbank	2224590
Sequence 7537	AB002328	Genbank	2224600
Sequence 7538	AB002336	Genbank	2224616
Sequence 7539	AB002346	Genbank	6634018
Sequence 7540	AB002351	Genbank	2224646
Sequence 7541	AB002352	Genbank	2224648
Sequence 7542	AB002356	Genbank	2224656
Sequence 7543	AB002365	Genbank	2224674
Sequence 7544	AB002368	Genbank	2224680
Sequence 7545	AB002374	Genbank	2280484
Sequence 7546	AB002375	Genbank	2280486
Sequence 7547	AB002377	Genbank	6634024
Sequence 7548	AB002381	Genbank	2224706
Sequence 7549	AB002382	Genbank	2224708
Sequence 7550	AB002387	Genbank	2224718
Sequence 7551	AB002559	Genbank	1944129
Sequence 7552	AB003476	Genbank	2081606
Sequence 7553	AB003730	Genbank	2627128
Sequence 7554	AB005754	Genbank	6456482
Sequence 7555	AB006630	Genbank	2564331
Sequence 7556	AB006651	Genbank	3201570
Sequence 7557	AB007447	Genbank	2463530
Sequence 7558	AB007510	Genbank	2463576
Sequence 7559	AB007859	Genbank	6634028
Sequence 7560	AB007882	Genbank	2887418
Sequence 7561	AB007895	Genbank	2662150
Sequence 7562	AB007899	Genbank	2662158
Sequence 7563	AB007900	Genbank	2662160
Sequence 7564	AB007920	Genbank	3413863
Sequence 7565	AB007930	Genbank	3413883
Sequence 7566	AB007931	Genbank	3413885

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Sequence 7567	AB007944	Genbank	3413911
Sequence 7568	AB007957	Genbank	3413931
Sequence 7569	AB007965	Genbank	3413940
Sequence 7570	AB009398	Genbank	3618342
Sequence 7571	AB011086	Genbank	3043551
Sequence 7572	AB011087	Genbank	3043553
Sequence 7573	AB011096	Genbank	3043571
Sequence 7574	AB011113	Genbank	3043605
Sequence 7575	AB011144	Genbank	3043667
Sequence 7576	AB011149	Genbank	3043677
Sequence 7577	AB011151	Genbank	3043681
Sequence 7578	AB011155	Genbank	3043689
Sequence 7579	AB011166	Genbank	3043711
Sequence 7580	AB011167	Genbank	3043713
Sequence 7581	AB011169	Genbank	3043717
Sequence 7582	AB011175	Genbank	3043729
Sequence 7583	AB011536	Genbank	3449297
Sequence 7584	AB011542	Genbank	3449309
Sequence 7585	AB012124	Genbank	4126408
Sequence 7586	AB012193	Genbank	3599675
Sequence 7587	AB012911	Genbank	3062802
Sequence 7588	AB012922	Genbank	4126426
Sequence 7589	AB014087	Genbank	5672599
Sequence 7590	AB014535	Genbank	3327083
Sequence 7591	AB014540	Genbank	3327093
Sequence 7592	AB014542	Genbank	3327097
Sequence 7593	AB014557	Genbank	3327127
Sequence 7594	AB014563	Genbank	3327139
Sequence 7595	AB014566	Genbank	3327145
Sequence 7596	AB014569	Genbank	3327151
Sequence 7597	AB014589	Genbank	3327191
Sequence 7598	AB014592	Genbank	3327197
Sequence 7599	AB014597	Genbank	3327207
Sequence 7600	AB015597	Genbank	4115713
Sequence 7601	AB017114	Genbank	4586879
Sequence 7602	AB017335	Genbank	3582440
Sequence 7603	AB017498	Genbank	3582144
Sequence 7604	AB017548	Genbank	3885363
Sequence 7605	AB018247	Genbank	4049592
Sequence 7606	AB018255	Genbank	3882144
Sequence 7607	AB018281	Genbank	3882196
Sequence 7608	AB018290	Genbank	3882214
Sequence 7609	AB018302	Genbank	3882238
Sequence 7610	AB018315	Genbank	3882264
Sequence 7611	AB018316	Genbank	3882266
Sequence 7612	AB018324	Genbank	3882282
Sequence 7613	AB018331	Genbank	3882296
Sequence 7614	AB018335	Genbank	3882304
Sequence 7615	AB018342	Genbank	3882318
Sequence 7616	AB018347	Genbank	3882328
Sequence 7617	AB018350	Genbank	3882334
Sequence 7618	AB018353	Genbank	3882340
Sequence 7619	AB018357	Genbank	6009486
Sequence 7620	AB019564	Genbank	3885367
Sequence 7621	AB019568	Genbank	3885371
Sequence 7622	AB020315	Genbank	3925828



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Sequence 7623	AB020335	Genbank	6518494
Sequence 7624	AB020623	Genbank	3985929
Sequence 7625	AB020631	Genbank	4240136
Sequence 7626	AB020645	Genbank	4240164
Sequence 7627	AB020659	Genbank	4240192
Sequence 7628	AB020662	Genbank	4240198
Sequence 7629	AB020666	Genbank	6635134
Sequence 7630	AB020674	Genbank	4240222
Sequence 7631	AB020679	Genbank	4240232
Sequence 7632	AB020692	Genbank	4240258
Sequence 7633	AB020697	Genbank	4240268
Sequence 7634	AB020698	Genbank	4240270
Sequence 7635	AB020713	Genbank	4240300
Sequence 7636	AB020714	Genbank	4240302
Sequence 7637	AB020718	Genbank	4240310
Sequence 7638	AB020721	Genbank	4240316
Sequence 7639	AB020764	Genbank	6467144
Sequence 7640	AB020874	Genbank	4003394
Sequence 7641	AB021663	Genbank	4996450
Sequence 7642	AB022537	Genbank	6942217
Sequence 7643	AB023049	Genbank	5672604
Sequence 7644	AB023050	Genbank	5672605
Sequence 7645	AB023051	Genbank	5672606
Sequence 7646	AB023052	Genbank	5672607
Sequence 7647	AB023137	Genbank	4589471
Sequence 7648	AB023145	Genbank	4589487
Sequence 7649	AB023150	Genbank	4589509
Sequence 7650	AB023152	Genbank	4589513
Sequence 7651	AB023160	Genbank	4589529
Sequence 7652	AB023165	Genbank	4589539
Sequence 7653	AB023195	Genbank	4589599
Sequence 7654	AB023199	Genbank	4589607
Sequence 7655	AB023205	Genbank	4589619
Sequence 7656	AB023420	Genbank	4579908
Sequence 7657	AB024704	Genbank	4589928
Sequence 7658	AB025580	Genbank	5931568
Sequence 7659	AB026906	Genbank	5295993
Sequence 7660	AB028893	Genbank	6552364
Sequence 7661	AB028942	Genbank	5689368
Sequence 7662	AB028952	Genbank	5689394
Sequence 7663	AB028985	Genbank	5689460
Sequence 7664	AB028986	Genbank	5689462
Sequence 7665	AB028990	Genbank	5689470
Sequence 7666	AB028999	Genbank	5689488
Sequence 7667	AB029002	Genbank	5689494
Sequence 7668	AB029003	Genbank	5689496
Sequence 7669	AB029008	Genbank	5689506
Sequence 7670	AB029013	Genbank	5689516
Sequence 7671	AB029017	Genbank	5689524
Sequence 7672	AB029019	Genbank	5689528
Sequence 7673	AB029025	Genbank	5689540
Sequence 7674	AB029026	Genbank	5689542
Sequence 7675	AB029027	Genbank	5689544
Sequence 7676	AB031051	Genbank	6683742
Sequence 7677	AB032417	Genbank	6277265
Sequence 7678	AB032963	Genbank	6329896

Table 3-3

Sequence 7679	AB032975	Genbank	6330044
Sequence 7680	AB032978	Genbank	6330094
Sequence 7681	AB032983	Genbank	6330128
Sequence 7682	AB033007	Genbank	6330242
Sequence 7683	AB033011	Genbank	6330301
Sequence 7684	AB033018	Genbank	6330350
Sequence 7685	AB033023	Genbank	6330384
Sequence 7686	AB033026	Genbank	6330406
Sequence 7687	AB033027	Genbank	6330415
Sequence 7688	AB033033	Genbank	6330496
Sequence 7689	AB033051	Genbank	6330667
Sequence 7690	AB033058	Genbank	6330721
Sequence 7691	AB033070	Genbank	6330818
Sequence 7692	AB033073	Genbank	6330839
Sequence 7693	AB033078	Genbank	6330873
Sequence 7694	AB033104	Genbank	6331314
Sequence 7695	AB034205	Genbank	6899845
Sequence 7696	AB035519	Genbank	6681348
Sequence 7697	AB035698	Genbank	6970477
Sequence 7698	AB037728	Genbank	7242968
Sequence 7699	AB037743	Genbank	7243024
Sequence 7700	AB037748	Genbank	7243034
Sequence 7701	AB037761	Genbank	7243060
Sequence 7702	AB037763	Genbank	7243064
Sequence 7703	AB037775	Genbank	7243088
Sequence 7704	AB037783	Genbank	7243104
Sequence 7705	AB037784	Genbank	7243106
Sequence 7706	AB037797	Genbank	7243132
Sequence 7707	AB037801	Genbank	7243140
Sequence 7708	AB037807	Genbank	7243152
Sequence 7709	AB037819	Genbank	7243176
Sequence 7710	AB037844	Genbank	7243226
Sequence 7711	AB037847	Genbank	7243232
Sequence 7712	AB037856	Genbank	7243267
Sequence 7713	AC000024	Genbank	2995601
Sequence 7714	AC000031	Genbank	4646246
Sequence 7715	AC000036	Genbank	7958979
Sequence 7716	AC000049	Genbank	5705995
Sequence 7717	AC000083	Genbank	3810636
Sequence 7718	AC000087	Genbank	7124755
Sequence 7719	AC000088	Genbank	7124834
Sequence 7720	AC000095	Genbank	7940365
Sequence 7721	AC000114	Genbank	1809233
Sequence 7722	AC000134	Genbank	4755212
Sequence 7723	AC000353	Genbank	6970735
Sequence 7724	AC000378	Genbank	2270906
Sequence 7725	AC002064	Genbank	2076723
Sequence 7726	AC002066	Genbank	2076721
Sequence 7727	AC002094	Genbank	2155224
Sequence 7728	AC002105	Genbank	2288973
Sequence 7729	AC002117	Genbank	2281075
Sequence 7730	AC002347	Genbank	2828783
Sequence 7731	AC002377	Genbank	2275192
Sequence 7732	AC002401	Genbank	2599240
Sequence 7733	AC002470	Genbank	6478944
Sequence 7734	AC002522	Genbank	7124014

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**Table 3-3**

Sequence 7847	AC006480	Genbank	6289252
Sequence 7848	AC006487	Genbank	4314418
Sequence 7849	AC006512	Genbank	4926863
Sequence 7850	AC006987	Genbank	5123989
Sequence 7851	AC007022	Genbank	4753292
Sequence 7852	AC007040	Genbank	4371305
Sequence 7853	AC007172	Genbank	4731066
Sequence 7854	AC007308	Genbank	5903110
Sequence 7855	AC007347	Genbank	6806840
Sequence 7856	AC007381	Genbank	6604532
Sequence 7857	AC007393	Genbank	5306300
Sequence 7858	AC007401	Genbank	6560920
Sequence 7859	AC007617	Genbank	5230397
Sequence 7860	AC007681	Genbank	5836156
Sequence 7861	AC007686	Genbank	6466519
Sequence 7862	AC007688	Genbank	5815499
Sequence 7863	AC007842	Genbank	5080755
Sequence 7864	AC007845	Genbank	7109495
Sequence 7865	AC008041	Genbank	5649181
Sequence 7866	AC008132	Genbank	7025879
Sequence 7867	AC008134	Genbank	5801655
Sequence 7868	AC008990	Genbank	7209394
Sequence 7869	AC009330	Genbank	6553960
Sequence 7870	AC009514	Genbank	6016667
Sequence 7871	AC010077	Genbank	5870275
Sequence 7872	AC011311	Genbank	6850247
Sequence 7873	AC012085	Genbank	6634755
Sequence 7874	AC016026	Genbank	7940357
Sequence 7875	AF000364	Genbank	2697102
Sequence 7876	AF001433	Genbank	2529704
Sequence 7877	AF001435	Genbank	2529708
Sequence 7878	AF001687	Genbank	2653735
Sequence 7879	AF001977	Genbank	2914738
Sequence 7880	AF002020	Genbank	2276462
Sequence 7881	AF002163	Genbank	2290769
Sequence 7882	AF002223	Genbank	4079670
Sequence 7883	AF002697	Genbank	2511528
Sequence 7884	AF002715	Genbank	2352276
Sequence 7885	AF002994	Genbank	2121297
Sequence 7886	AF002996	Genbank	2121299
Sequence 7887	AF004562	Genbank	3041872
Sequence 7888	AF005067	Genbank	6979018
Sequence 7889	AF005258	Genbank	2627428
Sequence 7890	AF005361	Genbank	2343115
Sequence 7891	AF006043	Genbank	2674061
Sequence 7892	AF006083	Genbank	2282031
Sequence 7893	AF006087	Genbank	2282039
Sequence 7894	AF006515	Genbank	2645432
Sequence 7895	AF007170	Genbank	2865251
Sequence 7896	AF007544	Genbank	2970122
Sequence 7897	AF007791	Genbank	3779196
Sequence 7898	AF007871	Genbank	2358278
Sequence 7899	AF008303	Genbank	2580619
Sequence 7900	AF010187	Genbank	7025910
Sequence 7901	AF012872	Genbank	2326226
Sequence 7902	AF013970	Genbank	2801421

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**Table 3-3**

Sequence 7903	AF014398	Genbank	8148061
Sequence 7904	AF015044	Genbank	4102712
Sequence 7905	AF015913	Genbank	2323409
Sequence 7906	AF016050	Genbank	2978559
Sequence 7907	AF016266	Genbank	2529562
Sequence 7908	AF017790	Genbank	2501872
Sequence 7909	AF020038	Genbank	3641397
Sequence 7910	AF020736	Genbank	3450954
Sequence 7911	AF020833	Genbank	2460199
Sequence 7912	AF021336	Genbank	2541972
Sequence 7913	AF021351	Genbank	2460207
Sequence 7914	AF022229	Genbank	2809382
Sequence 7915	AF023268	Genbank	2564910
Sequence 7916	AF023462	Genbank	2564670
Sequence 7917	AF023676	Genbank	3211721
Sequence 7918	AF025439	Genbank	2815605
Sequence 7919	AF025999	Genbank	2570853
Sequence 7920	AF026166	Genbank	4090928
Sequence 7921	AF026292	Genbank	2559009
Sequence 7922	AF026548	Genbank	2583172
Sequence 7923	AF027299	Genbank	2739095
Sequence 7924	AF027302	Genbank	2522533
Sequence 7925	AF029308	Genbank	2564750
Sequence 7926	AF031416	Genbank	3213216
Sequence 7927	AF032456	Genbank	3004908
Sequence 7928	AF034373	Genbank	3820483
Sequence 7929	AF034756	Genbank	2654138
Sequence 7930	AF034759	Genbank	2653648
Sequence 7931	AF035191	Genbank	4104352
Sequence 7932	AF035286	Genbank	2661038
Sequence 7933	AF035295	Genbank	2661050
Sequence 7934	AF035296	Genbank	2661052
Sequence 7935	AF036536	Genbank	4104518
Sequence 7936	AF036682	Genbank	2707821
Sequence 7937	AF037448	Genbank	3037012
Sequence 7938	AF037643	Genbank	2746542
Sequence 7939	AF038196	Genbank	2795917
Sequence 7940	AF038318	Genbank	2708698
Sequence 7941	AF038391	Genbank	3123905
Sequence 7942	AF038392	Genbank	3123907
Sequence 7943	AF038554	Genbank	2895558
Sequence 7944	AF039703	Genbank	2789655
Sequence 7945	AF040707	Genbank	3688794
Sequence 7946	AF040966	Genbank	2792367
Sequence 7947	AF041004	Genbank	4335800
Sequence 7948	AF041248	Genbank	3243117
Sequence 7949	AF041259	Genbank	3335396
Sequence 7950	AF041381	Genbank	3080766
Sequence 7951	AF041483	Genbank	3493528
Sequence 7952	AF042084	Genbank	2792517
Sequence 7953	AF042166	Genbank	3298596
Sequence 7954	AF042379	Genbank	2801700
Sequence 7955	AF043045	Genbank	3282770
Sequence 7956	AF043324	Genbank	3005062
Sequence 7957	AF044127	Genbank	4105189
Sequence 7958	AF044321	Genbank	3170263

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Sequence 7959	AF044588	Genbank	2865520
Sequence 7960	AF044773	Genbank	3002950
Sequence 7961	AF044954	Genbank	4164441
Sequence 7962	AF044956	Genbank	5326827
Sequence 7963	AF045606	Genbank	8277249
Sequence 7964	AF046025	Genbank	4581063
Sequence 7965	AF047181	Genbank	2909853
Sequence 7966	AF047184	Genbank	2909859
Sequence 7967	AF047431	Genbank	5514630
Sequence 7968	AF047432	Genbank	2911479
Sequence 7969	AF047437	Genbank	3335129
Sequence 7970	AF047442	Genbank	3335139
Sequence 7971	AF047472	Genbank	2921872
Sequence 7972	AF047599	Genbank	2906227
Sequence 7973	AF049910	Genbank	3435156
Sequence 7974	AF050078	Genbank	3818465
Sequence 7975	AF050641	Genbank	5326822
Sequence 7976	AF051782	Genbank	2947237
Sequence 7977	AF052059	Genbank	6851088
Sequence 7978	AF052106	Genbank	3360413
Sequence 7979	AF052130	Genbank	3360439
Sequence 7980	AF052155	Genbank	3360466
Sequence 7981	AF052178	Genbank	3360489
Sequence 7982	AF052179	Genbank	3360490
Sequence 7983	AF052182	Genbank	3360494
Sequence 7984	AF052186	Genbank	3360498
Sequence 7985	AF052504	Genbank	6650080
Sequence 7986	AF053069	Genbank	3136151
Sequence 7987	AF053074	Genbank	3283044
Sequence 7988	AF054187	Genbank	4092059
Sequence 7989	AF054284	Genbank	4033734
Sequence 7990	AF054990	Genbank	3005703
Sequence 7991	AF055014	Genbank	3005738
Sequence 7992	AF055017	Genbank	3005743
Sequence 7993	AF055022	Genbank	3005750
Sequence 7994	AF055029	Genbank	3005759
Sequence 7995	AF057160	Genbank	3694919
Sequence 7996	AF058392	Genbank	3063679
Sequence 7997	AF058988	Genbank	3300089
Sequence 7998	AF059321	Genbank	3169563
Sequence 7999	AF061016	Genbank	3127126
Sequence 8000	AF061243	Genbank	3779243
Sequence 8001	AF061738	Genbank	4335940
Sequence 8002	AF061749	Genbank	3372676
Sequence 8003	AF062536	Genbank	3139076
Sequence 8004	AF063308	Genbank	4106355
Sequence 8005	AF064084	Genbank	3135668
Sequence 8006	AF064603	Genbank	3152659
Sequence 8007	AF065389	Genbank	3152702
Sequence 8008	AF067170	Genbank	4894373
Sequence 8009	AF067513	Genbank	3850305
Sequence 8010	AF067656	Genbank	3901271
Sequence 8011	AF067972	Genbank	4927369
Sequence 8012	AF068235	Genbank	4321975
Sequence 8013	AF068754	Genbank	3283408
Sequence 8014	AF069301	Genbank	3193335

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Sequence 7791	AC005042	Genbank	4156138
Sequence 7792	AC005058	Genbank	4156135
Sequence 7793	AC005071	Genbank	4508112
Sequence 7794	AC005081	Genbank	6560914
Sequence 7795	AC005088	Genbank	4753221
Sequence 7796	AC005104	Genbank	4218027
Sequence 7797	AC005192	Genbank	3264575
Sequence 7798	AC005214	Genbank	3282166
Sequence 7799	AC005225	Genbank	6094661
Sequence 7800	AC005253	Genbank	3288886
Sequence 7801	AC005318	Genbank	3885345
Sequence 7802	AC005324	Genbank	3366582
Sequence 7803	AC005325	Genbank	3366581
Sequence 7804	AC005339	Genbank	3355454
Sequence 7805	AC005366	Genbank	3367508
Sequence 7806	AC005369	Genbank	3367505
Sequence 7807	AC005392	Genbank	3399669
Sequence 7808	AC005480	Genbank	4835818
Sequence 7809	AC005488	Genbank	5836194
Sequence 7810	AC005516	Genbank	3900835
Sequence 7811	AC005519	Genbank	5091653
Sequence 7812	AC005523	Genbank	3451032
Sequence 7813	AC005531	Genbank	4153875
Sequence 7814	AC005538	Genbank	4508129
Sequence 7815	AC005546	Genbank	3478635
Sequence 7816	AC005549	Genbank	3598724
Sequence 7817	AC005612	Genbank	3540153
Sequence 7818	AC005629	Genbank	7243877
Sequence 7819	AC005670	Genbank	3688099
Sequence 7820	AC005686	Genbank	3608161
Sequence 7821	AC005726	Genbank	3810672
Sequence 7822	AC005754	Genbank	3688074
Sequence 7823	AC005768	Genbank	6598827
Sequence 7824	AC005789	Genbank	3702281
Sequence 7825	AC005828	Genbank	3789713
Sequence 7826	AC005841	Genbank	4731044
Sequence 7827	AC005899	Genbank	3935221
Sequence 7828	AC005921	Genbank	4982556
Sequence 7829	AC005923	Genbank	4309927
Sequence 7830	AC005924	Genbank	4309926
Sequence 7831	AC005988	Genbank	4156128
Sequence 7832	AC006026	Genbank	6042101
Sequence 7833	AC006040	Genbank	4314426
Sequence 7834	AC006042	Genbank	4508120
Sequence 7835	AC006064	Genbank	4572650
Sequence 7836	AC006077	Genbank	3935193
Sequence 7837	AC006088	Genbank	4204701
Sequence 7838	AC006146	Genbank	5836157
Sequence 7839	AC006165	Genbank	3980464
Sequence 7840	AC006241	Genbank	4160141
Sequence 7841	AC006252	Genbank	4309923
Sequence 7842	AC006255	Genbank	5306223
Sequence 7843	AC006299	Genbank	4106997
Sequence 7844	AC006441	Genbank	4760435
Sequence 7845	AC006449	Genbank	6102666
Sequence 7846	AC006478	Genbank	4508145

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Sequence 8015	AF069984	Genbank	3242977
Sequence 8016	AF070550	Genbank	3387913
Sequence 8017	AF070561	Genbank	3387928
Sequence 8018	AF070563	Genbank	3387931
Sequence 8019	AF070578	Genbank	3387950
Sequence 8020	AF070598	Genbank	3387976
Sequence 8021	AF070603	Genbank	3387983
Sequence 8022	AF070663	Genbank	4454701
Sequence 8023	AF071172	Genbank	5107833
Sequence 8024	AF071202	Genbank	3335172
Sequence 8025	AF071309	Genbank	3426319
Sequence 8026	AF071593	Genbank	3249712
Sequence 8027	AF071738	Genbank	4263875
Sequence 8028	AF071748	Genbank	3916211
Sequence 8029	AF072933	Genbank	5305428
Sequence 8030	AF073344	Genbank	5410229
Sequence 8031	AF074331	Genbank	5052074
Sequence 8032	AF075575	Genbank	3600027
Sequence 8033	AF076273	Genbank	4185718
Sequence 8034	AF076678	Genbank	4884560
Sequence 8035	AF076844	Genbank	4019216
Sequence 8036	AF077036	Genbank	4689119
Sequence 8037	AF077042	Genbank	4689131
Sequence 8038	AF077188	Genbank	5565654
Sequence 8039	AF077203	Genbank	4679019
Sequence 8040	AF077367	Genbank	3820534
Sequence 8041	AF078103	Genbank	4218944
Sequence 8042	AF078107	Genbank	3342907
Sequence 8043	AF078671	Genbank	4877563
Sequence 8044	AF078776	Genbank	3511274
Sequence 8045	AF078845	Genbank	5531804
Sequence 8046	AF078847	Genbank	5531808
Sequence 8047	AF078854	Genbank	5531822
Sequence 8048	AF078863	Genbank	5531840
Sequence 8049	AF078866	Genbank	5531846
Sequence 8050	AF080561	Genbank	3746786
Sequence 8051	AF081484	Genbank	3420928
Sequence 8052	AF083068	Genbank	4808551
Sequence 8053	AF083106	Genbank	7555470
Sequence 8054	AF083190	Genbank	3599414
Sequence 8055	AF083246	Genbank	5106786
Sequence 8056	AF083255	Genbank	3435311
Sequence 8057	AF085355	Genbank	5114044
Sequence 8058	AF085357	Genbank	5114048
Sequence 8059	AF085359	Genbank	5114052
Sequence 8060	AF086234	Genbank	3483579
Sequence 8061	AF086280	Genbank	3483625
Sequence 8062	AF086406	Genbank	3483751
Sequence 8063	AF087438	Genbank	3820591
Sequence 8064	AF087986	Genbank	3523192
Sequence 8065	AF088060	Genbank	3523266
Sequence 8066	AF089841	Genbank	4218954
Sequence 8067	AF090426	Genbank	3982903
Sequence 8068	AF090927	Genbank	6690220
Sequence 8069	AF091035	Genbank	6002584
Sequence 8070	AF091073	Genbank	3859983

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Sequence 7735	AC002550	Genbank	2570261
Sequence 7736	AC002553	Genbank	3126783
Sequence 7737	AC003010	Genbank	2981254
Sequence 7738	AC003025	Genbank	3337308
Sequence 7739	AC003031	Genbank	2570227
Sequence 7740	AC003036	Genbank	2935595
Sequence 7741	AC003098	Genbank	2822155
Sequence 7742	AC003103	Genbank	2842782
Sequence 7743	AC003663	Genbank	3097871
Sequence 7744	AC003665	Genbank	3808091
Sequence 7745	AC003687	Genbank	2828778
Sequence 7746	AC003950	Genbank	4262275
Sequence 7747	AC003963	Genbank	2995604
Sequence 7748	AC004016	Genbank	2781374
Sequence 7749	AC004017	Genbank	2795792
Sequence 7750	AC004020	Genbank	3219330
Sequence 7751	AC004080	Genbank	2822164
Sequence 7752	AC004084	Genbank	2822156
Sequence 7753	AC004098	Genbank	3097872
Sequence 7754	AC004126	Genbank	3242744
Sequence 7755	AC004150	Genbank	4585948
Sequence 7756	AC004228	Genbank	4263838
Sequence 7757	AC004234	Genbank	2914672
Sequence 7758	AC004242	Genbank	3132845
Sequence 7759	AC004253	Genbank	3169206
Sequence 7760	AC004263	Genbank	2935616
Sequence 7761	AC004382	Genbank	3252819
Sequence 7762	AC004410	Genbank	2959558
Sequence 7763	AC004472	Genbank	2984582
Sequence 7764	AC004475	Genbank	2988396
Sequence 7765	AC004500	Genbank	2996639
Sequence 7766	AC004522	Genbank	3006227
Sequence 7767	AC004526	Genbank	3779035
Sequence 7768	AC004551	Genbank	3309005
Sequence 7769	AC004583	Genbank	3293210
Sequence 7770	AC004696	Genbank	3135391
Sequence 7771	AC004703	Genbank	3228509
Sequence 7772	AC004707	Genbank	3249127
Sequence 7773	AC004757	Genbank	3341707
Sequence 7774	AC004770	Genbank	3212836
Sequence 7775	AC004771	Genbank	3668108
Sequence 7776	AC004801	Genbank	4204244
Sequence 7777	AC004812	Genbank	3970970
Sequence 7778	AC004821	Genbank	4753291
Sequence 7779	AC004823	Genbank	4156207
Sequence 7780	AC004835	Genbank	4508154
Sequence 7781	AC004854	Genbank	4827328
Sequence 7782	AC004857	Genbank	3694665
Sequence 7783	AC004882	Genbank	5523837
Sequence 7784	AC004893	Genbank	3694662
Sequence 7785	AC004938	Genbank	3213059
Sequence 7786	AC004966	Genbank	5306307
Sequence 7787	AC004997	Genbank	5441941
Sequence 7788	AC005032	Genbank	5649384
Sequence 7789	AC005037	Genbank	4827310
Sequence 7790	AC005041	Genbank	4508118



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Sequence 8071	AF092136	Genbank	5138921
Sequence 8072	AF092565	Genbank	3661609
Sequence 8073	AF093239	Genbank	3661615
Sequence 8074	AF094516	Genbank	3820613
Sequence 8075	AF095192	Genbank	4322819
Sequence 8076	AF095448	Genbank	4063889
Sequence 8077	AF095890	Genbank	4185790
Sequence 8078	AF096160	Genbank	4454849
Sequence 8079	AF097514	Genbank	4808600
Sequence 8080	AF098865	Genbank	4204674
Sequence 8081	AF098948	Genbank	5456746
Sequence 8082	AF100615	Genbank	4808624
Sequence 8083	AF100755	Genbank	5410295
Sequence 8084	AF100756	Genbank	5410297
Sequence 8085	AF103800	Genbank	6048967
Sequence 8086	AF104913	Genbank	3941723
Sequence 8087	AF105366	Genbank	5106522
Sequence 8088	AF106798	Genbank	5805207
Sequence 8089	AF107405	Genbank	5531903
Sequence 8090	AF107406	Genbank	5531905
Sequence 8091	AF110184	Genbank	5565858
Sequence 8092	AF111168	Genbank	4186181
Sequence 8093	AF111853	Genbank	6560625
Sequence 8094	AF112227	Genbank	4545218
Sequence 8095	AF113019	Genbank	6642761
Sequence 8096	AF113129	Genbank	6523820
Sequence 8097	AF113132	Genbank	5326801
Sequence 8098	AF113249	Genbank	6650673
Sequence 8099	AF113251	Genbank	5852417
Sequence 8100	AF113702	Genbank	6855636
Sequence 8101	AF116241	Genbank	5006438
Sequence 8102	AF117888	Genbank	5732617
Sequence 8103	AF118124	Genbank	4235636
Sequence 8104	AF124145	Genbank	5931954
Sequence 8105	AF125102	Genbank	5106999
Sequence 8106	AF125525	Genbank	4689281
Sequence 8107	AF126021	Genbank	6563273
Sequence 8108	AF126246	Genbank	4406523
Sequence 8109	AF126782	Genbank	6318547
Sequence 8110	AF126799	Genbank	4406527
Sequence 8111	AF127138	Genbank	5922724
Sequence 8112	AF127563	Genbank	4455124
Sequence 8113	AF127761	Genbank	4455128
Sequence 8114	AF127966	Genbank	5532271
Sequence 8115	AF128458	Genbank	7140573
Sequence 8116	AF129930	Genbank	4558509
Sequence 8117	AF131742	Genbank	4406554
Sequence 8118	AF131797	Genbank	4406625
Sequence 8119	AF131802	Genbank	4406633
Sequence 8120	AF131820	Genbank	4406655
Sequence 8121	AF131826	Genbank	4406662
Sequence 8122	AF132033	Genbank	5524202
Sequence 8123	AF132856	Genbank	4809025
Sequence 8124	AF132940	Genbank	4680650
Sequence 8125	AF132946	Genbank	4680662
Sequence 8126	AF132965	Genbank	4680700

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Sequence 8127	AF134726	Genbank	4529886
Sequence 8128	AF134803	Genbank	4868362
Sequence 8129	AF136271	Genbank	4732145
Sequence 8130	AF136715	Genbank	5019773
Sequence 8131	AF140710	Genbank	6073848
Sequence 8132	AF141347	Genbank	4929133
Sequence 8133	AF141870	Genbank	5006601
Sequence 8134	AF143536	Genbank	4929219
Sequence 8135	AF145732	Genbank	5579330
Sequence 8136	AF147271	Genbank	5823152
Sequence 8137	AF147331	Genbank	4761682
Sequence 8138	AF147410	Genbank	4761761
Sequence 8139	AF147787	Genbank	5231122
Sequence 8140	AF148513	Genbank	4809268
Sequence 8141	AF149045	Genbank	6010479
Sequence 8142	AF150087	Genbank	5107162
Sequence 8143	AF151018	Genbank	7106757
Sequence 8144	AF151020	Genbank	7106761
Sequence 8145	AF151042	Genbank	7106805
Sequence 8146	AF151051	Genbank	7106823
Sequence 8147	AF151109	Genbank	6166337
Sequence 8148	AF151799	Genbank	4929550
Sequence 8149	AF151805	Genbank	4929562
Sequence 8150	AF151808	Genbank	4929568
Sequence 8151	AF151811	Genbank	4929574
Sequence 8152	AF151826	Genbank	4929604
Sequence 8153	AF151841	Genbank	4929634
Sequence 8154	AF151846	Genbank	4929644
Sequence 8155	AF151861	Genbank	4929674
Sequence 8156	AF151869	Genbank	4929690
Sequence 8157	AF151886	Genbank	4929724
Sequence 8158	AF151902	Genbank	4929756
Sequence 8159	AF151904	Genbank	4929760
Sequence 8160	AF152961	Genbank	5499740
Sequence 8161	AF155095	Genbank	5360084
Sequence 8162	AF155110	Genbank	5360114
Sequence 8163	AF155238	Genbank	9186822
Sequence 8164	AF156165	Genbank	7145093
Sequence 8165	AF157378	Genbank	5714631
Sequence 8166	AF159295	Genbank	5714635
Sequence 8167	AF161371	Genbank	6841155
Sequence 8168	AF161417	Genbank	6841247
Sequence 8169	AF161448	Genbank	6841309
Sequence 8170	AF161455	Genbank	6841323
Sequence 8171	AF161458	Genbank	6841439
Sequence 8172	AF161485	Genbank	6841493
Sequence 8173	AF161491	Genbank	6841505
Sequence 8174	AF161493	Genbank	6841509
Sequence 8175	AF161511	Genbank	6841545
Sequence 8176	AF161530	Genbank	6841583
Sequence 8177	AF163441	Genbank	6969979
Sequence 8178	AF165967	Genbank	5802826
Sequence 8179	AF167572	Genbank	6164703
Sequence 8180	AF167706	Genbank	6979310
Sequence 8181	AF168787	Genbank	7239175
Sequence 8182	AF168956	Genbank	5702387

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Table 3-3

Sequence 8183	AF180682	Genbank	6684524
Sequence 8184	AF181265	Genbank	7212810
Sequence 8185	AF182316	Genbank	6731234
Sequence 8186	AF187320	Genbank	6164847
Sequence 8187	AF187554	Genbank	6653225
Sequence 8188	AF190167	Genbank	6456117
Sequence 8189	AF190725	Genbank	6118538
Sequence 8190	AF191339	Genbank	6180012
Sequence 8191	AF191340	Genbank	6180014
Sequence 8192	AF192968	Genbank	6449082
Sequence 8193	AF196779	Genbank	6180170
Sequence 8194	AF196969	Genbank	6289073
Sequence 8195	AF198444	Genbank	7025338
Sequence 8196	AF198487	Genbank	6941955
Sequence 8197	AF199596	Genbank	6842049
Sequence 8198	AF203815	Genbank	6979641
Sequence 8199	AF203978	Genbank	6503203
Sequence 8200	AF207907	Genbank	6653648
Sequence 8201	AF212162	Genbank	6665785
Sequence 8202	AF220417	Genbank	7678700
Sequence 8203	AF223408	Genbank	6911266
Sequence 8204	AF224669	Genbank	7012905
Sequence 8205	AF227218	Genbank	7159279
Sequence 8206	AJ000186	Genbank	2463195
Sequence 8207	AJ000332	Genbank	2274967
Sequence 8208	AJ000644	Genbank	2695707
Sequence 8209	AJ001050	Genbank	2832345
Sequence 8210	AJ001443	Genbank	6006514
Sequence 8211	AJ002955	Genbank	2632122
Sequence 8212	AJ004832	Genbank	2982500
Sequence 8213	AJ006291	Genbank	3805937
Sequence 8214	AJ007398	Genbank	3668140
Sequence 8215	AJ007509	Genbank	3319955
Sequence 8216	AJ007670	Genbank	3560123
Sequence 8217	AJ010597	Genbank	3559873
Sequence 8218	AJ011930	Genbank	3859769
Sequence 8219	AJ012463	Genbank	3850049
Sequence 8220	AJ012499	Genbank	5441359
Sequence 8221	AJ131186	Genbank	5689737
Sequence 8222	AJ223366	Genbank	6691913
Sequence 8223	AJ224442	Genbank	2911586
Sequence 8224	AJ245416	Genbank	5701851
Sequence 8225	AJ250475	Genbank	8919097
Sequence 8226	AJ275986	Genbank	7228110
Sequence 8227	AK000056	Genbank	7019892
Sequence 8228	AK000161	Genbank	7020067
Sequence 8229	AK000181	Genbank	7020098
Sequence 8230	AK000221	Genbank	7020163
Sequence 8231	AK000228	Genbank	7020174
Sequence 8232	AK000260	Genbank	7020221
Sequence 8233	AK000284	Genbank	7020260
Sequence 8234	AK000286	Genbank	7020264
Sequence 8235	AK000298	Genbank	7020286
Sequence 8236	AK000301	Genbank	7020291
Sequence 8237	AK000357	Genbank	7020388
Sequence 8238	AK000361	Genbank	7020395

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Sequence 8239	AK000371	Genbank	7020413
Sequence 8240	AK000373	Genbank	7020417
Sequence 8241	AK000398	Genbank	7020459
Sequence 8242	AK000407	Genbank	7020474
Sequence 8243	AK000436	Genbank	7020522
Sequence 8244	AK000474	Genbank	7020586
Sequence 8245	AK000498	Genbank	7020628
Sequence 8246	AK000505	Genbank	7020640
Sequence 8247	AK000543	Genbank	7020709
Sequence 8248	AK000544	Genbank	7020710
Sequence 8249	AK000558	Genbank	7020734
Sequence 8250	AK000560	Genbank	7020738
Sequence 8251	AK000595	Genbank	7020796
Sequence 8252	AK000630	Genbank	7020848
Sequence 8253	AK000651	Genbank	7020882
Sequence 8254	AK000664	Genbank	7020901
Sequence 8255	AK000669	Genbank	7020909
Sequence 8256	AK000714	Genbank	7020975
Sequence 8257	AK000739	Genbank	7021014
Sequence 8258	AK000740	Genbank	7021016
Sequence 8259	AK000745	Genbank	7021025
Sequence 8260	AK000757	Genbank	7021043
Sequence 8261	AK000759	Genbank	7021046
Sequence 8262	AK000799	Genbank	7021103
Sequence 8263	AK000859	Genbank	7021183
Sequence 8264	AK000946	Genbank	7021928
Sequence 8265	AK000982	Genbank	7021980
Sequence 8266	AK000990	Genbank	7021992
Sequence 8267	AK001090	Genbank	7022139
Sequence 8268	AK001112	Genbank	7022170
Sequence 8269	AK001123	Genbank	7022186
Sequence 8270	AK001184	Genbank	7022279
Sequence 8271	AK001188	Genbank	7022286
Sequence 8272	AK001262	Genbank	7022406
Sequence 8273	AK001264	Genbank	7022409
Sequence 8274	AK001269	Genbank	7022419
Sequence 8275	AK001277	Genbank	7022431
Sequence 8276	AK001281	Genbank	7022437
Sequence 8277	AK001288	Genbank	7022448
Sequence 8278	AK001292	Genbank	7022455
Sequence 8279	AK001313	Genbank	7022490
Sequence 8280	AK001330	Genbank	7022520
Sequence 8281	AK001344	Genbank	7022543
Sequence 8282	AK001363	Genbank	7022575
Sequence 8283	AK001364	Genbank	7022577
Sequence 8284	AK001366	Genbank	7022579
Sequence 8285	AK001387	Genbank	7022615
Sequence 8286	AK001392	Genbank	7022621
Sequence 8287	AK001395	Genbank	7022625
Sequence 8288	AK001410	Genbank	7022649
Sequence 8289	AK001436	Genbank	7022692
Sequence 8290	AK001478	Genbank	7022760
Sequence 8291	AK001492	Genbank	7022781
Sequence 8292	AK001508	Genbank	7022805
Sequence 8293	AK001521	Genbank	7022828
Sequence 8294	AK001539	Genbank	7022856

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Sequence 8295	AK001565	Genbank	7022895
Sequence 8296	AK001601	Genbank	7022955
Sequence 8297	AK001613	Genbank	7022975
Sequence 8298	AK001627	Genbank	7022996
Sequence 8299	AK001636	Genbank	7023010
Sequence 8300	AK001675	Genbank	7023079
Sequence 8301	AK001690	Genbank	7023105
Sequence 8302	AK001691	Genbank	7023106
Sequence 8303	AK001700	Genbank	7023122
Sequence 8304	AK001714	Genbank	7023146
Sequence 8305	AK001716	Genbank	7023150
Sequence 8306	AK001725	Genbank	7023165
Sequence 8307	AK001741	Genbank	7023192
Sequence 8308	AK001775	Genbank	7023255
Sequence 8309	AK001829	Genbank	7023339
Sequence 8310	AK001852	Genbank	7023376
Sequence 8311	AK001939	Genbank	7023513
Sequence 8312	AK001962	Genbank	7023551
Sequence 8313	AK002019	Genbank	7023647
Sequence 8314	AK002051	Genbank	7023698
Sequence 8315	AK002060	Genbank	7023713
Sequence 8316	AK002094	Genbank	7023767
Sequence 8317	AK002136	Genbank	7023830
Sequence 8318	AK002165	Genbank	7023876
Sequence 8319	AK002212	Genbank	7023953
Sequence 8320	AL008639	Genbank	6599068
Sequence 8321	AL008721	Genbank	3171883
Sequence 8322	AL020995	Genbank	5881341
Sequence 8323	AL021453	Genbank	3413288
Sequence 8324	AL021546	Genbank	2826890
Sequence 8325	AL021707	Genbank	4582132
Sequence 8326	AL021807	Genbank	9367202
Sequence 8327	AL021917	Genbank	9367203
Sequence 8328	AL021978	Genbank	3135963
Sequence 8329	AL022157	Genbank	3319676
Sequence 8330	AL022313	Genbank	4200326
Sequence 8331	AL022318	Genbank	4826439
Sequence 8332	AL022339	Genbank	3355600
Sequence 8333	AL022394	Genbank	9581758
Sequence 8334	AL023803	Genbank	9408726
Sequence 8335	AL024498	Genbank	5924006
Sequence 8336	AL031387	Genbank	4493578
Sequence 8337	AL031427	Genbank	4835258
Sequence 8338	AL031680	Genbank	9368417
Sequence 8339	AL031685	Genbank	9368423
Sequence 8340	AL031733	Genbank	4826495
Sequence 8341	AL031778	Genbank	4153958
Sequence 8342	AL034343	Genbank	5931807
Sequence 8343	AL034379	Genbank	5918013
Sequence 8344	AL034380	Genbank	7981257
Sequence 8345	AL035420	Genbank	5918161
Sequence 8346	AL035551	Genbank	4826429
Sequence 8347	AL035587	Genbank	6002306
Sequence 8348	AL035659	Genbank	6562059
Sequence 8349	AL035683	Genbank	7288039
Sequence 8350	AL049219	Genbank	4499949

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Sequence 8407	AL121790	Genbank	8919824
Sequence 8408	AL122020	Genbank	8176920
Sequence 8409	AL133036	Genbank	6453441
Sequence 8410	AL133064	Genbank	6453490
Sequence 8411	AL133078	Genbank	6453522
Sequence 8412	AL133215	Genbank	7228177
Sequence 8413	AL133246	Genbank	7594587
Sequence 8414	AL133353	Genbank	6706037
Sequence 8415	AL133455	Genbank	7019734
Sequence 8416	AL133555	Genbank	6599122
Sequence 8417	AL133583	Genbank	6599167
Sequence 8418	AL133589	Genbank	6599176
Sequence 8419	AL133609	Genbank	6599219
Sequence 8420	AL135744	Genbank	6682291
Sequence 8421	AL135858	Genbank	7159622
Sequence 8422	AL136295	Genbank	6850939
Sequence 8423	AL136543	Genbank	6807646
Sequence 8424	AL137263	Genbank	6807692
Sequence 8425	AL137304	Genbank	6807768
Sequence 8426	AL137327	Genbank	6807818
Sequence 8427	AL137406	Genbank	6807955
Sequence 8428	AL137471	Genbank	6808079
Sequence 8429	AL137540	Genbank	6808218
Sequence 8430	AL137548	Genbank	6808231
Sequence 8431	AL137585	Genbank	6808304
Sequence 8432	AL137641	Genbank	6808443
Sequence 8433	AL137681	Genbank	6807931
Sequence 8434	AL137683	Genbank	6807935
Sequence 8435	AL137727	Genbank	6808256
Sequence 8436	AL137743	Genbank	6808323
Sequence 8437	AL139165	Genbank	6969146
Sequence 8438	AP000010	Genbank	4666256
Sequence 8439	AP000046	Genbank	3132356
Sequence 8440	AP000066	Genbank	4579987
Sequence 8441	AP000493	Genbank	5926660
Sequence 8442	AP000501	Genbank	5926688
Sequence 8443	AP000529	Genbank	5931507
Sequence 8444	AP000694	Genbank	6693626
Sequence 8445	AP001115	Genbank	6899854
Sequence 8446	AP001137	Genbank	6970361
Sequence 8447	D00591	Genbank	220051
Sequence 8448	D01038	Genbank	220140
Sequence 8449	D10040	Genbank	219899
Sequence 8450	D10495	Genbank	520586
Sequence 8451	D12981	Genbank	219979
Sequence 8452	D13119	Genbank	285909
Sequence 8453	D13286	Genbank	496368
Sequence 8454	D13540	Genbank	220071
Sequence 8455	D13627	Genbank	286010
Sequence 8456	D13635	Genbank	285982
Sequence 8457	D13748	Genbank	219402
Sequence 8458	D14662	Genbank	285948
Sequence 8459	D14689	Genbank	285956
Sequence 8460	D14694	Genbank	603801
Sequence 8461	D14811	Genbank	285966
Sequence 8462	D16307	Genbank	303594

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Sequence 8463	D16562	Genbank	506336
Sequence 8464	D21063	Genbank	434752
Sequence 8465	D21163	Genbank	434758
Sequence 8466	D21235	Genbank	498145
Sequence 8467	D21254	Genbank	575577
Sequence 8468	D21261	Genbank	434762
Sequence 8469	D21262	Genbank	434764
Sequence 8470	D21852	Genbank	434768
Sequence 8471	D25215	Genbank	517114
Sequence 8472	D26156	Genbank	505087
Sequence 8473	D26181	Genbank	473712
Sequence 8474	D26351	Genbank	450470
Sequence 8475	D26485	Genbank	468934
Sequence 8476	D28473	Genbank	551621
Sequence 8477	D28476	Genbank	460710
Sequence 8478	D28589	Genbank	460714
Sequence 8479	D29954	Genbank	473940
Sequence 8480	D29958	Genbank	473948
Sequence 8481	D30756	Genbank	488500
Sequence 8482	D31762	Genbank	498149
Sequence 8483	D31764	Genbank	498153
Sequence 8484	D31767	Genbank	505091
Sequence 8485	D31885	Genbank	505097
Sequence 8486	D31888	Genbank	506340
Sequence 8487	D37766	Genbank	2429078
Sequence 8488	D38047	Genbank	1037163
Sequence 8489	D38048	Genbank	1531532
Sequence 8490	D38073	Genbank	862331
Sequence 8491	D38522	Genbank	559331
Sequence 8492	D38524	Genbank	633070
Sequence 8493	D38549	Genbank	559702
Sequence 8494	D38553	Genbank	559714
Sequence 8495	D38555	Genbank	559716
Sequence 8496	D38616	Genbank	1304117
Sequence 8497	D42047	Genbank	577306
Sequence 8498	D42055	Genbank	577312
Sequence 8499	D42085	Genbank	577316
Sequence 8500	D43682	Genbank	1060913
Sequence 8501	D43949	Genbank	603952
Sequence 8502	D43950	Genbank	603954
Sequence 8503	D43951	Genbank	603956
Sequence 8504	D45021	Genbank	624872
Sequence 8505	D45131	Genbank	1304103
Sequence 8506	D49489	Genbank	1136742
Sequence 8507	D49490	Genbank	1072306
Sequence 8508	D50369	Genbank	2605589
Sequence 8509	D50372	Genbank	2605593
Sequence 8510	D50923	Genbank	1469188
Sequence 8511	D50929	Genbank	1469200
Sequence 8512	D55716	Genbank	1255616
Sequence 8513	D63475	Genbank	1665724
Sequence 8514	D63478	Genbank	1469869
Sequence 8515	D63479	Genbank	6633998
Sequence 8516	D63486	Genbank	1469885
Sequence 8517	D63780	Genbank	2196444
Sequence 8518	D63861	Genbank	1769811



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Sequence 8519	D63875	Genbank	961441
Sequence 8520	D78014	Genbank	1330241
Sequence 8521	D79205	Genbank	1754620
Sequence 8522	D79984	Genbank	1136385
Sequence 8523	D79991	Genbank	1136397
Sequence 8524	D80000	Genbank	1136415
Sequence 8525	D80009	Genbank	1136433
Sequence 8526	D80010	Genbank	1136435
Sequence 8527	D82348	Genbank	1311461
Sequence 8528	D83077	Genbank	1304131
Sequence 8529	D83778	Genbank	1228038
Sequence 8530	D83781	Genbank	1228044
Sequence 8531	D83782	Genbank	1228046
Sequence 8532	D84064	Genbank	2618587
Sequence 8533	D86198	Genbank	3062805
Sequence 8534	D86962	Genbank	1503997
Sequence 8535	D86965	Genbank	1504003
Sequence 8536	D86977	Genbank	1504027
Sequence 8537	D86978	Genbank	1504029
Sequence 8538	D86985	Genbank	6634002
Sequence 8539	D86987	Genbank	3869186
Sequence 8540	D87127	Genbank	1817551
Sequence 8541	D87436	Genbank	1665766
Sequence 8542	D87447	Genbank	1665782
Sequence 8543	D87452	Genbank	1665792
Sequence 8544	D87464	Genbank	1665812
Sequence 8545	D87470	Genbank	1665822
Sequence 8546	D87717	Genbank	1663709
Sequence 8547	D87735	Genbank	1620021
Sequence 8548	D88674	Genbank	2641951
Sequence 8549	D88687	Genbank	1843433
Sequence 8550	D89980	Genbank	2804272
Sequence 8551	D90391	Genbank	219491
Sequence 8552	E01094	Genbank	2169353
Sequence 8553	E01787	Genbank	2170040
Sequence 8554	E01816	Genbank	2170068
Sequence 8555	E01956	Genbank	2170204
Sequence 8556	E02164	Genbank	2170402
Sequence 8557	E02628	Genbank	2170856
Sequence 8558	E06721	Genbank	2174903
Sequence 8559	E12458	Genbank	3251291
Sequence 8560	E13330	Genbank	3252135
Sequence 8561	E14580	Genbank	5709263
Sequence 8562	E14872	Genbank	5709555
Sequence 8563	E15239	Genbank	5709922
Sequence 8564	E15695	Genbank	5710378
Sequence 8565	E17361	Genbank	5712044
Sequence 8566	J02642	Genbank	182862
Sequence 8567	J02923	Genbank	189501
Sequence 8568	J03007	Genbank	179211
Sequence 8569	J03015	Genbank	337755
Sequence 8570	J03202	Genbank	186916
Sequence 8571	J03473	Genbank	337423
Sequence 8572	J03518	Genbank	340389
Sequence 8573	J03528	Genbank	188671
Sequence 8574	J03575	Genbank	189737

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Sequence 8575	J03576	Genbank	189753
Sequence 8576	J03592	Genbank	339722
Sequence 8577	J03799	Genbank	186840
Sequence 8578	J03827	Genbank	340418
Sequence 8579	J04031	Genbank	187464
Sequence 8580	J04088	Genbank	292829
Sequence 8581	J04164	Genbank	177801
Sequence 8582	J04173	Genbank	551173
Sequence 8583	J04444	Genbank	181239
Sequence 8584	J04543	Genbank	338243
Sequence 8585	J04611	Genbank	178649
Sequence 8586	J04615	Genbank	338246
Sequence 8587	J04988	Genbank	184422
Sequence 8588	J05594	Genbank	1203981
Sequence 8589	J05633	Genbank	186504
Sequence 8590	K00558	Genbank	340020
Sequence 8591	L00160	Genbank	189904
Sequence 8592	L00635	Genbank	292032
Sequence 8593	L01457	Genbank	179282
Sequence 8594	L04733	Genbank	307084
Sequence 8595	L05093	Genbank	401844
Sequence 8596	L05425	Genbank	179284
Sequence 8597	L06237	Genbank	437000
Sequence 8598	L06328	Genbank	340200
Sequence 8599	L06419	Genbank	190073
Sequence 8600	L07044	Genbank	291894
Sequence 8601	L08238	Genbank	307198
Sequence 8602	L09159	Genbank	307374
Sequence 8603	L09561	Genbank	3192937
Sequence 8604	L11931	Genbank	307421
Sequence 8605	L11932	Genbank	307423
Sequence 8606	L13850	Genbank	292165
Sequence 8607	L14076	Genbank	307437
Sequence 8608	L14283	Genbank	307355
Sequence 8609	L14599	Genbank	348238
Sequence 8610	L14837	Genbank	292937
Sequence 8611	L16783	Genbank	452438
Sequence 8612	L19597	Genbank	306467
Sequence 8613	L19956	Genbank	306456
Sequence 8614	L20941	Genbank	507251
Sequence 8615	L22005	Genbank	388308
Sequence 8616	L22009	Genbank	347313
Sequence 8617	L22740	Genbank	409222
Sequence 8618	L23959	Genbank	414316
Sequence 8619	L25270	Genbank	457136
Sequence 8620	L25876	Genbank	414584
Sequence 8621	L25880	Genbank	450272
Sequence 8622	L26524	Genbank	457232
Sequence 8623	L27211	Genbank	558656
Sequence 8624	L27711	Genbank	808006
Sequence 8625	L29216	Genbank	632965
Sequence 8626	L29296	Genbank	559042
Sequence 8627	L29555	Genbank	522196
Sequence 8628	L34075	Genbank	508481
Sequence 8629	L36056	Genbank	561631
Sequence 8630	L36818	Genbank	556191

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Sequence 8631	L38961	Genbank	624703
Sequence 8632	L39068	Genbank	994714
Sequence 8633	L39210	Genbank	1702963
Sequence 8634	L39211	Genbank	755645
Sequence 8635	L40326	Genbank	695361
Sequence 8636	L40586	Genbank	1222629
Sequence 8637	L40933	Genbank	1160964
Sequence 8638	L41607	Genbank	886293
Sequence 8639	L41816	Genbank	790789
Sequence 8640	L42379	Genbank	1203964
Sequence 8641	L42542	Genbank	974142
Sequence 8642	L42809	Genbank	1160966
Sequence 8643	L43509	Genbank	896282
Sequence 8644	L47162	Genbank	1082035
Sequence 8645	L47647	Genbank	1000861
Sequence 8646	L49345	Genbank	1405422
Sequence 8647	L54057	Genbank	1196416
Sequence 8648	L77701	Genbank	1280205
Sequence 8649	L78464	Genbank	1479980
Sequence 8650	L78669	Genbank	1374862
Sequence 8651	M11147	Genbank	182513
Sequence 8652	M11560	Genbank	178350
Sequence 8653	M12938	Genbank	182515
Sequence 8654	M13520	Genbank	179459
Sequence 8655	M13755	Genbank	184570
Sequence 8656	M14326	Genbank	340005
Sequence 8657	M14631	Genbank	183416
Sequence 8658	M15182	Genbank	183232
Sequence 8659	M16038	Genbank	187268
Sequence 8660	M16247	Genbank	178044
Sequence 8661	M16279	Genbank	188542
Sequence 8662	M17081	Genbank	178151
Sequence 8663	M17851	Genbank	182860
Sequence 8664	M17885	Genbank	190231
Sequence 8665	M17886	Genbank	190233
Sequence 8666	M18112	Genbank	190166
Sequence 8667	M18157	Genbank	186640
Sequence 8668	M18366	Genbank	179131
Sequence 8669	M19961	Genbank	180940
Sequence 8670	M20372	Genbank	189372
Sequence 8671	M20776	Genbank	180909
Sequence 8672	M21154	Genbank	178517
Sequence 8673	M21575	Genbank	1311702
Sequence 8674	M21895	Genbank	189523
Sequence 8675	M22382	Genbank	190126
Sequence 8676	M22538	Genbank	986883
Sequence 8677	M22803	Genbank	190379
Sequence 8678	M22919	Genbank	189016
Sequence 8679	M22920	Genbank	189021
Sequence 8680	M22960	Genbank	190282
Sequence 8681	M23254	Genbank	511636
Sequence 8682	M23419	Genbank	181996
Sequence 8683	M23725	Genbank	189997
Sequence 8684	M24194	Genbank	187701
Sequence 8685	M24355	Genbank	182604
Sequence 8686	M24486	Genbank	190785

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Sequence 8687	M24543	Genbank	341200
Sequence 8688	M26066	Genbank	189854
Sequence 8689	M26325	Genbank	186688
Sequence 8690	M26663	Genbank	618463
Sequence 8691	M29366	Genbank	181979
Sequence 8692	M29551	Genbank	180708
Sequence 8693	M31159	Genbank	183115
Sequence 8694	M31511	Genbank	179907
Sequence 8695	M31606	Genbank	189940
Sequence 8696	M33308	Genbank	340236
Sequence 8697	M34055	Genbank	190791
Sequence 8698	M34064	Genbank	416292
Sequence 8699	M34081	Genbank	337458
Sequence 8700	M34088	Genbank	182122
Sequence 8701	M34668	Genbank	190738
Sequence 8702	M37499	Genbank	188886
Sequence 8703	M38188	Genbank	189378
Sequence 8704	M55153	Genbank	339520
Sequence 8705	M55618	Genbank	184483
Sequence 8706	M57567	Genbank	178986
Sequence 8707	M58028	Genbank	340071
Sequence 8708	M59371	Genbank	181943
Sequence 8709	M59849	Genbank	182591
Sequence 8710	M61715	Genbank	340367
Sequence 8711	M62810	Genbank	188563
Sequence 8712	M64098	Genbank	183891
Sequence 8713	M64571	Genbank	187382
Sequence 8714	M64788	Genbank	190855
Sequence 8715	M65217	Genbank	184404
Sequence 8716	M67480	Genbank	190364
Sequence 8717	M69066	Genbank	188625
Sequence 8718	M69181	Genbank	641957
Sequence 8719	M73816	Genbank	183609
Sequence 8720	M74491	Genbank	178161
Sequence 8721	M75126	Genbank	184020
Sequence 8722	M76729	Genbank	189519
Sequence 8723	M80254	Genbank	181273
Sequence 8724	M80335	Genbank	189966
Sequence 8725	M80646	Genbank	338701
Sequence 8726	M80776	Genbank	179334
Sequence 8727	M81934	Genbank	180172
Sequence 8728	M83651	Genbank	431032
Sequence 8729	M84326	Genbank	178163
Sequence 8730	M84739	Genbank	179881
Sequence 8731	M85038	Genbank	190189
Sequence 8732	M86492	Genbank	183369
Sequence 8733	M91670	Genbank	181915
Sequence 8734	M95627	Genbank	870802
Sequence 8735	M96684	Genbank	190749
Sequence 8736	M96803	Genbank	338442
Sequence 8737	M96995	Genbank	181975
Sequence 8738	M97501	Genbank	180621
Sequence 8739	M97934	Genbank	186566
Sequence 8740	M97935	Genbank	2281070
Sequence 8741	M98478	Genbank	339577
Sequence 8742	M99422	Genbank	183662

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Sequence 8743	S60710	Genbank	300301
Sequence 8744	S62138	Genbank	386158
Sequence 8745	S67779	Genbank	459372
Sequence 8746	S69272	Genbank	546087
Sequence 8747	S70114	Genbank	546696
Sequence 8748	S73498	Genbank	688010
Sequence 8749	S74678	Genbank	241477
Sequence 8750	S74799	Genbank	797365
Sequence 8751	S75174	Genbank	802120
Sequence 8752	S82081	Genbank	1488412
Sequence 8753	U00930	Genbank	405043
Sequence 8754	U00947	Genbank	405049
Sequence 8755	U02390	Genbank	409928
Sequence 8756	U02493	Genbank	407307
Sequence 8757	U03886	Genbank	458225
Sequence 8758	U05572	Genbank	1419373
Sequence 8759	U07563	Genbank	514264
Sequence 8760	U07681	Genbank	706838
Sequence 8761	U07810	Genbank	469038
Sequence 8762	U07919	Genbank	995897
Sequence 8763	U08377	Genbank	508230
Sequence 8764	U09220	Genbank	799338
Sequence 8765	U09284	Genbank	516011
Sequence 8766	U09716	Genbank	606827
Sequence 8767	U09813	Genbank	1008454
Sequence 8768	U10248	Genbank	984280
Sequence 8769	U10323	Genbank	532312
Sequence 8770	U10439	Genbank	577169
Sequence 8771	U10691	Genbank	533522
Sequence 8772	U10886	Genbank	1685074
Sequence 8773	U12424	Genbank	525319
Sequence 8774	U12535	Genbank	530822
Sequence 8775	U13022	Genbank	537293
Sequence 8776	U13991	Genbank	562076
Sequence 8777	U14193	Genbank	555899
Sequence 8778	U14966	Genbank	550012
Sequence 8779	U14969	Genbank	550018
Sequence 8780	U14970	Genbank	550020
Sequence 8781	U14971	Genbank	550022
Sequence 8782	U15158	Genbank	576622
Sequence 8783	U16660	Genbank	564064
Sequence 8784	U18121	Genbank	915283
Sequence 8785	U18197	Genbank	603073
Sequence 8786	U18937	Genbank	899108
Sequence 8787	U19145	Genbank	914904
Sequence 8788	U19252	Genbank	808035
Sequence 8789	U20476	Genbank	3077819
Sequence 8790	U21910	Genbank	736402
Sequence 8791	U22055	Genbank	799176
Sequence 8792	U22815	Genbank	930340
Sequence 8793	U23028	Genbank	806853
Sequence 8794	U24169	Genbank	1215668
Sequence 8795	U24223	Genbank	1215670
Sequence 8796	U25816	Genbank	837262
Sequence 8797	U26425	Genbank	836664
Sequence 8798	U27515	Genbank	4096274

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Sequence 8799	U28387	Genbank	881950
Sequence 8800	U28686	Genbank	881953
Sequence 8801	U28727	Genbank	1142969
Sequence 8802	U28811	Genbank	1373018
Sequence 8803	U30255	Genbank	984324
Sequence 8804	U32944	Genbank	1209060
Sequence 8805	U32989	Genbank	993045
Sequence 8806	U33460	Genbank	4096590
Sequence 8807	U33760	Genbank	995823
Sequence 8808	U33818	Genbank	1163176
Sequence 8809	U34038	Genbank	1041728
Sequence 8810	U34877	Genbank	1143231
Sequence 8811	U34994	Genbank	6525311
Sequence 8812	U35116	Genbank	1008541
Sequence 8813	U36188	Genbank	1244507
Sequence 8814	U36764	Genbank	1036804
Sequence 8815	U37426	Genbank	1171152
Sequence 8816	U37558	Genbank	1017812
Sequence 8817	U38784	Genbank	1574947
Sequence 8818	U38894	Genbank	1589739
Sequence 8819	U38945	Genbank	1353569
Sequence 8820	U39400	Genbank	1234796
Sequence 8821	U39945	Genbank	1209686
Sequence 8822	U40152	Genbank	1113100
Sequence 8823	U40989	Genbank	1125005
Sequence 8824	U41371	Genbank	1173904
Sequence 8825	U41387	Genbank	1230563
Sequence 8826	U41806	Genbank	1145798
Sequence 8827	U46691	Genbank	1401077
Sequence 8828	U47742	Genbank	1517913
Sequence 8829	U49436	Genbank	1229139
Sequence 8830	U50079	Genbank	1277083
Sequence 8831	U51587	Genbank	1669823
Sequence 8832	U51625	Genbank	1695798
Sequence 8833	U51678	Genbank	1915966
Sequence 8834	U53209	Genbank	1256836
Sequence 8835	U53346	Genbank	1545981
Sequence 8836	U53530	Genbank	1314642
Sequence 8837	U54559	Genbank	2351379
Sequence 8838	U57052	Genbank	1519039
Sequence 8839	U58766	Genbank	1381178
Sequence 8840	U59435	Genbank	2697004
Sequence 8841	U61262	Genbank	1621606
Sequence 8842	U61397	Genbank	1518693
Sequence 8843	U61734	Genbank	1407825
Sequence 8844	U61843	Genbank	3650451
Sequence 8845	U62317	Genbank	6862558
Sequence 8846	U62583	Genbank	1778050
Sequence 8847	U63296	Genbank	2047312
Sequence 8848	U63743	Genbank	1695881
Sequence 8849	U64791	Genbank	1498734
Sequence 8850	U65676	Genbank	1654350
Sequence 8851	U65928	Genbank	1549382
Sequence 8852	U66618	Genbank	1549244
Sequence 8853	U67058	Genbank	4097702
Sequence 8854	U68723	Genbank	2114391

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Sequence 8855	U70063	Genbank	1743866
Sequence 8856	U70312	Genbank	2865218
Sequence 8857	U70451	Genbank	1763090
Sequence 8858	U72069	Genbank	1657775
Sequence 8859	U72398	Genbank	1622940
Sequence 8860	U72515	Genbank	1673519
Sequence 8861	U73167	Genbank	2880032
Sequence 8862	U73338	Genbank	1763268
Sequence 8863	U74612	Genbank	1842252
Sequence 8864	U74613	Genbank	1842254
Sequence 8865	U75329	Genbank	2507612
Sequence 8866	U75330	Genbank	2507614
Sequence 8867	U76638	Genbank	1710174
Sequence 8868	U76764	Genbank	1685050
Sequence 8869	U77456	Genbank	1679778
Sequence 8870	U79241	Genbank	1710187
Sequence 8871	U79302	Genbank	1710287
Sequence 8872	U79458	Genbank	4205085
Sequence 8873	U80040	Genbank	1718501
Sequence 8874	U80735	Genbank	2565045
Sequence 8875	U80811	Genbank	1857424
Sequence 8876	U81002	Genbank	4580010
Sequence 8877	U81599	Genbank	1764089
Sequence 8878	U82226	Genbank	1848270
Sequence 8879	U82535	Genbank	2149155
Sequence 8880	U83410	Genbank	1923242
Sequence 8881	U85658	Genbank	2058552
Sequence 8882	U89278	Genbank	1877500
Sequence 8883	U89505	Genbank	2078528
Sequence 8884	U89995	Genbank	2078532
Sequence 8885	U90339	Genbank	1906010
Sequence 8886	U94747	Genbank	2290529
Sequence 8887	U94788	Genbank	3041866
Sequence 8888	U96876	Genbank	2358268
Sequence 8889	U97156	Genbank	2459796
Sequence 8890	U97519	Genbank	2213812
Sequence 8891	V00572	Genbank	35434
Sequence 8892	X01060	Genbank	37432
Sequence 8893	X02152	Genbank	34312
Sequence 8894	X03363	Genbank	31197
Sequence 8895	X03473	Genbank	32106
Sequence 8896	X04408	Genbank	31914
Sequence 8897	X04526	Genbank	31667
Sequence 8898	X04741	Genbank	35439
Sequence 8899	X05332	Genbank	35740
Sequence 8900	X06272	Genbank	30865
Sequence 8901	X06409	Genbank	30204
Sequence 8902	X06562	Genbank	31737
Sequence 8903	X06747	Genbank	36101
Sequence 8904	X06994	Genbank	30302
Sequence 8905	X12433	Genbank	32451
Sequence 8906	X12597	Genbank	32326
Sequence 8907	X12660	Genbank	36654
Sequence 8908	X13294	Genbank	28685
Sequence 8909	X13916	Genbank	34338
Sequence 8910	X13939	Genbank	34237

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Sequence 8911	X15488	Genbank	30933
Sequence 8912	X15729	Genbank	38317
Sequence 8913	X15880	Genbank	30029
Sequence 8914	X16064	Genbank	37495
Sequence 8915	X16135	Genbank	32355
Sequence 8916	X16396	Genbank	35070
Sequence 8917	X17567	Genbank	36512
Sequence 8918	X17620	Genbank	35067
Sequence 8919	X51466	Genbank	31105
Sequence 8920	X52519	Genbank	36694
Sequence 8921	X52851	Genbank	30167
Sequence 8922	X52955	Genbank	29627
Sequence 8923	X53280	Genbank	29504
Sequence 8924	X56998	Genbank	37564
Sequence 8925	X57129	Genbank	31967
Sequence 8926	X57206	Genbank	33990
Sequence 8927	X59618	Genbank	36154
Sequence 8928	X61123	Genbank	29508
Sequence 8929	X64123	Genbank	35819
Sequence 8930	X64229	Genbank	30502
Sequence 8931	X64707	Genbank	29382
Sequence 8932	X64875	Genbank	398163
Sequence 8933	X66364	Genbank	36620
Sequence 8934	X67155	Genbank	6723674
Sequence 8935	X67334	Genbank	468703
Sequence 8936	X68836	Genbank	36326
Sequence 8937	X70940	Genbank	38455
Sequence 8938	X71428	Genbank	393415
Sequence 8939	X71810	Genbank	297905
Sequence 8940	X74070	Genbank	395086
Sequence 8941	X74794	Genbank	683749
Sequence 8942	X76057	Genbank	416016
Sequence 8943	X78136	Genbank	460772
Sequence 8944	X78706	Genbank	471311
Sequence 8945	X80197	Genbank	951271
Sequence 8946	X80230	Genbank	599828
Sequence 8947	X80910	Genbank	531475
Sequence 8948	X81197	Genbank	773572
Sequence 8949	X81889	Genbank	1702923
Sequence 8950	X82321	Genbank	1617117
Sequence 8951	X85137	Genbank	1155083
Sequence 8952	X86012	Genbank	976082
Sequence 8953	X92814	Genbank	1054751
Sequence 8954	X94333	Genbank	1518268
Sequence 8955	X94754	Genbank	1702931
Sequence 8956	X95762	Genbank	2584786
Sequence 8957	X96698	Genbank	1418766
Sequence 8958	X97064	Genbank	1296663
Sequence 8959	X97124	Genbank	1518264
Sequence 8960	X97335	Genbank	1507823
Sequence 8961	X97674	Genbank	1877214
Sequence 8962	X97795	Genbank	1495482
Sequence 8963	X98054	Genbank	1359754
Sequence 8964	X98261	Genbank	1770459
Sequence 8965	X98507	Genbank	1926310
Sequence 8966	X99141	Genbank	1903215



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Sequence 8967	X99802	Genbank	2769561
Sequence 8968	Y00052	Genbank	30308
Sequence 8969	Y00281	Genbank	36052
Sequence 8970	Y00282	Genbank	36048
Sequence 8971	Y00815	Genbank	34266
Sequence 8972	Y00978	Genbank	35359
Sequence 8973	Y08134	Genbank	1552274
Sequence 8974	Y09862	Genbank	1945760
Sequence 8975	Y10275	Genbank	1890330
Sequence 8976	Y12478	Genbank	1946204
Sequence 8977	Y13621	Genbank	2190399
Sequence 8978	Y13936	Genbank	2315201
Sequence 8979	Y14486	Genbank	5830437
Sequence 8980	Y15286	Genbank	2584788
Sequence 8981	Y18004	Genbank	4490941
Sequence 8982	Z11583	Genbank	35118
Sequence 8983	Z14244	Genbank	30150
Sequence 8984	Z18956	Genbank	36726
Sequence 8985	Z26649	Genbank	510116
Sequence 8986	Z37166	Genbank	587145
Sequence 8987	Z46376	Genbank	587201
Sequence 8988	Z50022	Genbank	1107702
Sequence 8989	Z58902	Genbank	1030815
Sequence 8990	Z69709	Genbank	1204107
Sequence 8991	Z69780	Genbank	1514560
Sequence 8992	Z70200	Genbank	3255964
Sequence 8993	Z71183	Genbank	6580491
Sequence 8994	Z72499	Genbank	1545951
Sequence 8995	Z73358	Genbank	1322149
Sequence 8996	Z73639	Genbank	2632099
Sequence 8997	Z83840	Genbank	4914518
Sequence 8998	Z84466	Genbank	3319673
Sequence 8999	Z92543	Genbank	3164068
Sequence 9000	Z92545	Genbank	2462414
Sequence 9001	Z93783	Genbank	4581336
Sequence 9002	Z95114	Genbank	5101742
Sequence 9003	Z97053	Genbank	9650676
Sequence 9004	Z98258	Genbank	2462407
Sequence 9005	Z98752	Genbank	9408718
Sequence 9006	Z99716	Genbank	4456457
Sequence 9007	AA011002	EST	1472029
Sequence 9008	AA024935	EST	1489859
Sequence 9009	AA025057	EST	1489962
Sequence 9010	AA025381	EST	1491520
Sequence 9011	AA027341	EST	1492958
Sequence 9012	AA031969	EST	1501922
Sequence 9013	AA033521	EST	1505367
Sequence 9014	AA033724	EST	1505542
Sequence 9015	AA037091	EST	1512209
Sequence 9016	AA037126	EST	1512234
Sequence 9017	AA037364	EST	1512602
Sequence 9018	AA040182	EST	1516598
Sequence 9019	AA043058	EST	1522593
Sequence 9020	AA044122	EST	1521980
Sequence 9021	AA044586	EST	1522977
Sequence 9022	AA044813	EST	1523016

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Sequence 9023	AA047046	EST	1524944
Sequence 9024	AA053156	EST	1544427
Sequence 9025	AA053431	EST	1544086
Sequence 9026	AA053679	EST	1544606
Sequence 9027	AA054463	EST	1545388
Sequence 9028	AA055407	EST	1547946
Sequence 9029	AA055649	EST	1547988
Sequence 9030	AA056099	EST	1548436
Sequence 9031	AA056273	EST	1548820
Sequence 9032	AA056358	EST	1548698
Sequence 9033	AA058929	EST	1551784
Sequence 9034	AA062553	EST	1556727
Sequence 9035	AA065298	EST	1929298
Sequence 9036	AA069599	EST	1576958
Sequence 9037	AA070333	EST	1577692
Sequence 9038	AA071122	EST	1578482
Sequence 9039	AA074907	EST	1614776
Sequence 9040	AA075864	EST	1615735
Sequence 9041	AA075873	EST	1615744
Sequence 9042	AA075984	EST	1615853
Sequence 9043	AA077364	EST	1836838
Sequence 9044	AA081041	EST	1622976
Sequence 9045	AA081608	EST	1623666
Sequence 9046	AA082133	EST	1624191
Sequence 9047	AA082281	EST	1624356
Sequence 9048	AA082487	EST	1624560
Sequence 9049	AA082543	EST	1624600
Sequence 9050	AA082817	EST	1624874
Sequence 9051	AA083182	EST	1625258
Sequence 9052	AA083288	EST	1625349
Sequence 9053	AA083300	EST	1625361
Sequence 9054	AA088420	EST	1633967
Sequence 9055	AA098867	EST	1645051
Sequence 9056	AA099415	EST	1645308
Sequence 9057	AA099496	EST	1645449
Sequence 9058	AA099923	EST	1646071
Sequence 9059	AA099926	EST	1646074
Sequence 9060	AA101077	EST	1647597
Sequence 9061	AA101100	EST	1647676
Sequence 9062	AA101277	EST	1648016
Sequence 9063	AA101440	EST	1648254
Sequence 9064	AA111991	EST	1664113
Sequence 9065	AA112480	EST	1665157
Sequence 9066	AA112633	EST	1665334
Sequence 9067	AA112679	EST	1665397
Sequence 9068	AA115409	EST	1670591
Sequence 9069	AA121091	EST	1678635
Sequence 9070	AA121210	EST	1678949
Sequence 9071	AA126105	EST	1685755
Sequence 9072	AA126762	EST	1686262
Sequence 9073	AA128709	EST	1688617
Sequence 9074	AA129754	EST	1690164
Sequence 9075	AA130211	EST	1691215
Sequence 9076	AA130220	EST	1691224
Sequence 9077	AA130247	EST	1691251
Sequence 9078	AA130520	EST	1691803

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Sequence 9079	AA131227	EST	1692735
Sequence 9080	AA131252	EST	1692814
Sequence 9081	AA131474	EST	1692962
Sequence 9082	AA131496	EST	1692984
Sequence 9083	AA132133	EST	1693667
Sequence 9084	AA132163	EST	1693672
Sequence 9085	AA132328	EST	1693818
Sequence 9086	AA132414	EST	1693905
Sequence 9087	AA132885	EST	1694372
Sequence 9088	AA135266	EST	1696351
Sequence 9089	AA135745	EST	1696757
Sequence 9090	AA135830	EST	1697090
Sequence 9091	AA143151	EST	1712521
Sequence 9092	AA143301	EST	1712672
Sequence 9093	AA147806	EST	1717195
Sequence 9094	AA148139	EST	1717530
Sequence 9095	AA149520	EST	1720338
Sequence 9096	AA149637	EST	1720438
Sequence 9097	AA149750	EST	1720892
Sequence 9098	AA150002	EST	1721155
Sequence 9099	AA150076	EST	1721298
Sequence 9100	AA150383	EST	1721914
Sequence 9101	AA151213	EST	1719468
Sequence 9102	AA151345	EST	1719890
Sequence 9103	AA151506	EST	1720046
Sequence 9104	AA152172	EST	1721224
Sequence 9105	AA156215	EST	1727895
Sequence 9106	AA156807	EST	1728440
Sequence 9107	AA157715	EST	1729340
Sequence 9108	AA158196	EST	1733007
Sequence 9109	AA158600	EST	1733436
Sequence 9110	AA160097	EST	1734545
Sequence 9111	AA160948	EST	1735663
Sequence 9112	AA164729	EST	1740889
Sequence 9113	AA165403	EST	1741436
Sequence 9114	AA165418	EST	1741554
Sequence 9115	AA167191	EST	1745698
Sequence 9116	AA167829	EST	1744980
Sequence 9117	AA169752	EST	1748137
Sequence 9118	AA171588	EST	1750657
Sequence 9119	AA174204	EST	1754484
Sequence 9120	AA179201	EST	1760816
Sequence 9121	AA179430	EST	1760782
Sequence 9122	AA179442	EST	1760794
Sequence 9123	AA179690	EST	1761923
Sequence 9124	AA181608	EST	1765136
Sequence 9125	AA181618	EST	1765085
Sequence 9126	AA186685	EST	1774906
Sequence 9127	AA186730	EST	1774847
Sequence 9128	AA187424	EST	1773633
Sequence 9129	AA187428	EST	1773747
Sequence 9130	AA187809	EST	1774003
Sequence 9131	AA188497	EST	1775584
Sequence 9132	AA188499	EST	1775586
Sequence 9133	AA188875	EST	1775902
Sequence 9134	AA190915	EST	1779571

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Sequence 9135	AA191160	EST	1779854
Sequence 9136	AA194169	EST	1783860
Sequence 9137	AA194896	EST	1784658
Sequence 9138	AA195259	EST	1784959
Sequence 9139	AA195352	EST	1785043
Sequence 9140	AA195510	EST	1785213
Sequence 9141	AA195535	EST	1785248
Sequence 9142	AA196350	EST	1791925
Sequence 9143	AA197018	EST	1792634
Sequence 9144	AA197063	EST	1792629
Sequence 9145	AA197137	EST	1792811
Sequence 9146	AA203450	EST	1799161
Sequence 9147	AA205846	EST	1801217
Sequence 9148	AA205928	EST	1801316
Sequence 9149	AA206583	EST	1801963
Sequence 9150	AA207229	EST	1802920
Sequence 9151	AA209239	EST	1807254
Sequence 9152	AA210796	EST	1809450
Sequence 9153	AA211864	EST	1810491
Sequence 9154	AA215319	EST	1815082
Sequence 9155	AA215526	EST	1815298
Sequence 9156	AA215534	EST	1815288
Sequence 9157	AA216769	EST	1817460
Sequence 9158	AA218567	EST	1832642
Sequence 9159	AA218697	EST	1832789
Sequence 9160	AA223382	EST	1843907
Sequence 9161	AA225008	EST	1846317
Sequence 9162	AA226737	EST	1848308
Sequence 9163	AA227227	EST	1848772
Sequence 9164	AA227608	EST	1849152
Sequence 9165	AA232784	EST	1855986
Sequence 9166	AA233063	EST	1856075
Sequence 9167	AA233297	EST	1856290
Sequence 9168	AA234499	EST	1858990
Sequence 9169	AA234963	EST	1858132
Sequence 9170	AA236353	EST	1858403
Sequence 9171	AA236418	EST	1858543
Sequence 9172	AA243646	EST	1874456
Sequence 9173	AA243672	EST	1874655
Sequence 9174	AA247773	EST	1879878
Sequence 9175	AA252002	EST	1886963
Sequence 9176	AA252445	EST	1887416
Sequence 9177	AA252465	EST	1887436
Sequence 9178	AA252567	EST	1887541
Sequence 9179	AA252657	EST	1887622
Sequence 9180	AA255982	EST	1891658
Sequence 9181	AA257153	EST	1891281
Sequence 9182	AA258425	EST	1893549
Sequence 9183	AA258503	EST	1893628
Sequence 9184	AA259061	EST	1894541
Sequence 9185	AA262003	EST	1897984
Sequence 9186	AA262559	EST	1898011
Sequence 9187	AA278264	EST	1920222
Sequence 9188	AA278642	EST	1919962
Sequence 9189	AA278910	EST	1920376
Sequence 9190	AA279735	EST	1921200

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Sequence 9191	AA280710	EST	1923603
Sequence 9192	AA281238	EST	1923919
Sequence 9193	AA282006	EST	1924848
Sequence 9194	AA282870	EST	1925786
Sequence 9195	AA282920	EST	1925896
Sequence 9196	AA284386	EST	1928720
Sequence 9197	AA284870	EST	1927464
Sequence 9198	AA287235	EST	1934261
Sequence 9199	AA287990	EST	1933814
Sequence 9200	AA291446	EST	1939425
Sequence 9201	AA291926	EST	1940090
Sequence 9202	AA293348	EST	1940745
Sequence 9203	AA294883	EST	1947228
Sequence 9204	AA296484	EST	1948818
Sequence 9205	AA297767	EST	1950170
Sequence 9206	AA299346	EST	1951678
Sequence 9207	AA300574	EST	1953135
Sequence 9208	AA300728	EST	1953296
Sequence 9209	AA301138	EST	1953491
Sequence 9210	AA301439	EST	1953773
Sequence 9211	AA302601	EST	1955083
Sequence 9212	AA303657	EST	1956009
Sequence 9213	AA304899	EST	1957247
Sequence 9214	AA304904	EST	1957469
Sequence 9215	AA304981	EST	1957328
Sequence 9216	AA305193	EST	1957520
Sequence 9217	AA305525	EST	1957850
Sequence 9218	AA305568	EST	1957915
Sequence 9219	AA305862	EST	1958192
Sequence 9220	AA305873	EST	1958203
Sequence 9221	AA306226	EST	1958554
Sequence 9222	AA306444	EST	1958772
Sequence 9223	AA306511	EST	1958840
Sequence 9224	AA306594	EST	1958923
Sequence 9225	AA306623	EST	1958952
Sequence 9226	AA306709	EST	1959037
Sequence 9227	AA306734	EST	1959083
Sequence 9228	AA306846	EST	1959174
Sequence 9229	AA306917	EST	1959247
Sequence 9230	AA306961	EST	1959291
Sequence 9231	AA306966	EST	1959316
Sequence 9232	AA307060	EST	1959538
Sequence 9233	AA307269	EST	1959597
Sequence 9234	AA307327	EST	1959655
Sequence 9235	AA307332	EST	1959660
Sequence 9236	AA307779	EST	1960177
Sequence 9237	AA307876	EST	1960276
Sequence 9238	AA307979	EST	1960308
Sequence 9239	AA308390	EST	1960719
Sequence 9240	AA308574	EST	1960922
Sequence 9241	AA309051	EST	1961377
Sequence 9242	AA309832	EST	1962325
Sequence 9243	AA310059	EST	1962388
Sequence 9244	AA310330	EST	1962679
Sequence 9245	AA311461	EST	1963787
Sequence 9246	AA311501	EST	1964046

Table 3-3

Sequence 9247	AA311933	EST	1964261
Sequence 9248	AA312489	EST	1964818
Sequence 9249	AA312669	EST	1965018
Sequence 9250	AA312778	EST	1965126
Sequence 9251	AA312886	EST	1965276
Sequence 9252	AA313319	EST	1965648
Sequence 9253	AA313489	EST	1965818
Sequence 9254	AA313896	EST	1966225
Sequence 9255	AA314146	EST	1966495
Sequence 9256	AA314350	EST	1966679
Sequence 9257	AA314550	EST	1966899
Sequence 9258	AA314707	EST	1967056
Sequence 9259	AA314717	EST	1967277
Sequence 9260	AA314882	EST	1967452
Sequence 9261	AA315444	EST	1967923
Sequence 9262	AA315472	EST	1967801
Sequence 9263	AA315499	EST	1967828
Sequence 9264	AA315975	EST	1968304
Sequence 9265	AA316030	EST	1968359
Sequence 9266	AA316470	EST	1968799
Sequence 9267	AA316551	EST	1968879
Sequence 9268	AA316590	EST	1968918
Sequence 9269	AA316620	EST	1968948
Sequence 9270	AA316641	EST	1968989
Sequence 9271	AA316743	EST	1969142
Sequence 9272	AA316864	EST	1969192
Sequence 9273	AA317246	EST	1969573
Sequence 9274	AA318236	EST	1970564
Sequence 9275	AA318266	EST	1970594
Sequence 9276	AA323846	EST	1976173
Sequence 9277	AA325370	EST	1977838
Sequence 9278	AA325474	EST	1977717
Sequence 9279	AA326465	EST	1978709
Sequence 9280	AA326466	EST	1978710
Sequence 9281	AA328435	EST	1980679
Sequence 9282	AA329233	EST	1981477
Sequence 9283	AA330793	EST	1983035
Sequence 9284	AA332288	EST	1984532
Sequence 9285	AA333116	EST	1985360
Sequence 9286	AA335696	EST	1987937
Sequence 9287	AA335862	EST	1988104
Sequence 9288	AA336878	EST	1989117
Sequence 9289	AA337404	EST	1989869
Sequence 9290	AA337798	EST	1990057
Sequence 9291	AA338634	EST	1990882
Sequence 9292	AA339622	EST	1991880
Sequence 9293	AA341987	EST	1994222
Sequence 9294	AA343749	EST	1995986
Sequence 9295	AA349886	EST	2002205
Sequence 9296	AA349983	EST	2002303
Sequence 9297	AA351222	EST	2003561
Sequence 9298	AA352688	EST	2005008
Sequence 9299	AA353179	EST	2005499
Sequence 9300	AA353913	EST	2006231
Sequence 9301	AA355954	EST	2008272
Sequence 9302	AA355956	EST	2008274

Table 3-3

Sequence 9303	AA356182	EST	2008511
Sequence 9304	AA356195	EST	2008524
Sequence 9305	AA358978	EST	2011296
Sequence 9306	AA359611	EST	2012169
Sequence 9307	AA359735	EST	2012052
Sequence 9308	AA364033	EST	2016351
Sequence 9309	AA367068	EST	2019406
Sequence 9310	AA368087	EST	2020446
Sequence 9311	AA369721	EST	2022039
Sequence 9312	AA370428	EST	2022933
Sequence 9313	AA371420	EST	2023780
Sequence 9314	AA371957	EST	2024275
Sequence 9315	AA372674	EST	2025182
Sequence 9316	AA375636	EST	2027956
Sequence 9317	AA376361	EST	2028679
Sequence 9318	AA376458	EST	2028777
Sequence 9319	AA378378	EST	2030695
Sequence 9320	AA378849	EST	2031168
Sequence 9321	AA386348	EST	2038701
Sequence 9322	AA397884	EST	2050623
Sequence 9323	AA399142	EST	2052896
Sequence 9324	AA399177	EST	2052913
Sequence 9325	AA401252	EST	2055141
Sequence 9326	AA401261	EST	2055168
Sequence 9327	AA401526	EST	2053804
Sequence 9328	AA402063	EST	2056854
Sequence 9329	AA403047	EST	2055609
Sequence 9330	AA406425	EST	2064410
Sequence 9331	AA412426	EST	2071129
Sequence 9332	AA417300	EST	2077408
Sequence 9333	AA417999	EST	2079818
Sequence 9334	AA418045	EST	2079864
Sequence 9335	AA418096	EST	2079897
Sequence 9336	AA418249	EST	2080078
Sequence 9337	AA421643	EST	2100459
Sequence 9338	AA424317	EST	2103287
Sequence 9339	AA425387	EST	2106170
Sequence 9340	AA425619	EST	2106375
Sequence 9341	AA425658	EST	2106433
Sequence 9342	AA425751	EST	2106453
Sequence 9343	AA425761	EST	2106481
Sequence 9344	AA427920	EST	2112054
Sequence 9345	AA428948	EST	2110491
Sequence 9346	AA429871	EST	2113108
Sequence 9347	AA431577	EST	2115285
Sequence 9348	AA433865	EST	2138779
Sequence 9349	AA436966	EST	2141880
Sequence 9350	AA442297	EST	2154175
Sequence 9351	AA442687	EST	2154565
Sequence 9352	AA446391	EST	2159056
Sequence 9353	AA448292	EST	2161962
Sequence 9354	AA449483	EST	2163233
Sequence 9355	AA449501	EST	2163251
Sequence 9356	AA449646	EST	2163396
Sequence 9357	AA450096	EST	2163846
Sequence 9358	AA450166	EST	2163916

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Sequence 9359	AA450276	EST	2164026
Sequence 9360	AA452716	EST	2166385
Sequence 9361	AA453565	EST	2167234
Sequence 9362	AA453899	EST	2167568
Sequence 9363	AA456454	EST	2179030
Sequence 9364	AA457365	EST	2180085
Sequence 9365	AA458613	EST	2183520
Sequence 9366	AA459167	EST	2184074
Sequence 9367	AA461383	EST	2186503
Sequence 9368	AA463367	EST	2188251
Sequence 9369	AA465402	EST	2191569
Sequence 9370	AA469033	EST	2195567
Sequence 9371	AA470067	EST	2197376
Sequence 9372	AA476876	EST	2205087
Sequence 9373	AA478162	EST	2206796
Sequence 9374	AA479499	EST	2208055
Sequence 9375	AA480816	EST	2210368
Sequence 9376	AA481233	EST	2210785
Sequence 9377	AA481838	EST	2209516
Sequence 9378	AA485255	EST	2214474
Sequence 9379	AA485520	EST	2214739
Sequence 9380	AA488447	EST	2215878
Sequence 9381	AA488488	EST	2215919
Sequence 9382	AA488513	EST	2215944
Sequence 9383	AA489117	EST	2218719
Sequence 9384	AA489288	EST	2218890
Sequence 9385	AA490389	EST	2219562
Sequence 9386	AA491213	EST	2220386
Sequence 9387	AA491638	EST	2221200
Sequence 9388	AA494334	EST	2224121
Sequence 9389	AA494355	EST	2224142
Sequence 9390	AA494387	EST	2224174
Sequence 9391	AA495912	EST	2229233
Sequence 9392	AA496486	EST	2229807
Sequence 9393	AA501442	EST	2236409
Sequence 9394	AA504269	EST	2240429
Sequence 9395	AA505816	EST	2241953
Sequence 9396	AA507818	EST	2244257
Sequence 9397	AA508038	EST	2244477
Sequence 9398	AA514302	EST	2253810
Sequence 9399	AA516531	EST	2256055
Sequence 9400	AA522888	EST	2263600
Sequence 9401	AA527374	EST	2269443
Sequence 9402	AA532530	EST	2276784
Sequence 9403	AA532673	EST	2276927
Sequence 9404	AA533360	EST	2277456
Sequence 9405	AA534734	EST	2278987
Sequence 9406	AA535663	EST	2279916
Sequence 9407	AA535845	EST	2280098
Sequence 9408	AA552507	EST	2322761
Sequence 9409	AA558357	EST	2328834
Sequence 9410	AA565548	EST	2337187
Sequence 9411	AA565867	EST	2337506
Sequence 9412	AA568785	EST	2341839
Sequence 9413	AA573427	EST	2347955
Sequence 9414	AA574223	EST	2348738

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Sequence 9415	AA576016	EST	2350531
Sequence 9416	AA576889	EST	2354363
Sequence 9417	AA579611	EST	2357795
Sequence 9418	AA581185	EST	2358957
Sequence 9419	AA587264	EST	2398078
Sequence 9420	AA587570	EST	2397245
Sequence 9421	AA594562	EST	2409912
Sequence 9422	AA598697	EST	2432369
Sequence 9423	AA600084	EST	2433709
Sequence 9424	AA600355	EST	2433980
Sequence 9425	AA601289	EST	2434914
Sequence 9426	AA603876	EST	2437737
Sequence 9427	AA604860	EST	2445724
Sequence 9428	AA608613	EST	2457041
Sequence 9429	AA609417	EST	2457845
Sequence 9430	AA612668	EST	2463706
Sequence 9431	AA625213	EST	2537598
Sequence 9432	AA626629	EST	2539016
Sequence 9433	AA627320	EST	2540337
Sequence 9434	AA628491	EST	2540878
Sequence 9435	AA628520	EST	2540907
Sequence 9436	AA631993	EST	2555407
Sequence 9437	AA634958	EST	2558172
Sequence 9438	AA640716	EST	2565966
Sequence 9439	AA641939	EST	2567157
Sequence 9440	AA652388	EST	2584040
Sequence 9441	AA659693	EST	2595847
Sequence 9442	AA662024	EST	2616115
Sequence 9443	AA663649	EST	2617640
Sequence 9444	AA668886	EST	2630385
Sequence 9445	AA679400	EST	2659922
Sequence 9446	AA679621	EST	2660143
Sequence 9447	AA687221	EST	2675412
Sequence 9448	AA687495	EST	2675686
Sequence 9449	AA693932	EST	2694870
Sequence 9450	AA694188	EST	2695126
Sequence 9451	AA700208	EST	2703171
Sequence 9452	AA701138	EST	2704303
Sequence 9453	AA704533	EST	2714451
Sequence 9454	AA705937	EST	2715855
Sequence 9455	AA709002	EST	2718920
Sequence 9456	AA716423	EST	2728697
Sequence 9457	AA722455	EST	2740162
Sequence 9458	AA722786	EST	2740493
Sequence 9459	AA730400	EST	2751604
Sequence 9460	AA731394	EST	2753550
Sequence 9461	AA742260	EST	2784260
Sequence 9462	AA746310	EST	2786296
Sequence 9463	AA746748	EST	2786734
Sequence 9464	AA747197	EST	2787155
Sequence 9465	AA749387	EST	2789345
Sequence 9466	AA757433	EST	2805296
Sequence 9467	AA761101	EST	2810031
Sequence 9468	AA765907	EST	2817145
Sequence 9469	AA769588	EST	2820826
Sequence 9470	AA772570	EST	2824353

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Sequence 9471	AA774779	EST	2834113
Sequence 9472	AA775625	EST	2834959
Sequence 9473	AA805474	EST	2874224
Sequence 9474	AA808205	EST	2877611
Sequence 9475	AA808239	EST	2877645
Sequence 9476	AA813991	EST	2883587
Sequence 9477	AA814182	EST	2883778
Sequence 9478	AA814817	EST	2884413
Sequence 9479	AA826906	EST	2900903
Sequence 9480	AA830072	EST	2903171
Sequence 9481	AA831991	EST	2905090
Sequence 9482	AA833749	EST	2908517
Sequence 9483	AA837407	EST	2912606
Sequence 9484	AA838157	EST	2913814
Sequence 9485	AA843207	EST	2929725
Sequence 9486	AA843238	EST	2929756
Sequence 9487	AA843878	EST	2930329
Sequence 9488	AA843908	EST	2930359
Sequence 9489	AA857964	EST	2946266
Sequence 9490	AA864964	EST	2959277
Sequence 9491	AA868452	EST	2963897
Sequence 9492	AA868722	EST	2964167
Sequence 9493	AA872507	EST	2968685
Sequence 9494	AA872913	EST	2969035
Sequence 9495	AA872991	EST	2969113
Sequence 9496	AA877350	EST	2986427
Sequence 9497	AA877789	EST	2986754
Sequence 9498	AA902103	EST	3037293
Sequence 9499	AA902974	EST	3038097
Sequence 9500	AA903253	EST	3038376
Sequence 9501	AA905330	EST	3040453
Sequence 9502	AA906868	EST	3042112
Sequence 9503	AA907186	EST	3042646
Sequence 9504	AA908460	EST	3047865
Sequence 9505	AA913203	EST	3052595
Sequence 9506	AA916003	EST	3055395
Sequence 9507	AA927612	EST	3077033
Sequence 9508	AA931566	EST	3085952
Sequence 9509	AA932278	EST	3086516
Sequence 9510	AA968524	EST	3143704
Sequence 9511	AA973790	EST	3148970
Sequence 9512	AA976114	EST	3151906
Sequence 9513	AA976653	EST	3154099
Sequence 9514	AA984122	EST	3162647
Sequence 9515	AA988106	EST	3173470
Sequence 9516	AA988525	EST	3174217
Sequence 9517	AA988576	EST	3174268
Sequence 9518	AA991580	EST	3178069
Sequence 9519	AF001542	EST	2529714
Sequence 9520	AI015791	EST	3230127
Sequence 9521	AI017095	EST	3231431
Sequence 9522	AI017902	EST	3232238
Sequence 9523	AI018625	EST	3233144
Sequence 9524	AI022209	EST	3239562
Sequence 9525	AI027035	EST	3244551
Sequence 9526	AI033991	EST	3254944

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Sequence 9527	AI034371	EST	3255324
Sequence 9528	AI040602	EST	3279796
Sequence 9529	AI051466	EST	3307000
Sequence 9530	AI052000	EST	3307991
Sequence 9531	AI056337	EST	3330203
Sequence 9532	AI056402	EST	3330268
Sequence 9533	AI061175	EST	3336543
Sequence 9534	AI064910	EST	6359182
Sequence 9535	AI066583	EST	3367285
Sequence 9536	AI076630	EST	3405808
Sequence 9537	AI076953	EST	3404782
Sequence 9538	AI078217	EST	3412625
Sequence 9539	AI079510	EST	3415761
Sequence 9540	AI080497	EST	3416748
Sequence 9541	AI081780	EST	3418572
Sequence 9542	AI084794	EST	3423217
Sequence 9543	AI084916	EST	3423339
Sequence 9544	AI085616	EST	3424039
Sequence 9545	AI088897	EST	3427956
Sequence 9546	AI090197	EST	3429256
Sequence 9547	AI091173	EST	3430232
Sequence 9548	AI094514	EST	3433490
Sequence 9549	AI095450	EST	3434426
Sequence 9550	AI114692	EST	6360037
Sequence 9551	AI123418	EST	3539184
Sequence 9552	AI124792	EST	3593306
Sequence 9553	AI126005	EST	3594519
Sequence 9554	AI129250	EST	3597764
Sequence 9555	AI133074	EST	6360390
Sequence 9556	AI133088	EST	6360404
Sequence 9557	AI133274	EST	6360590
Sequence 9558	AI133426	EST	6360742
Sequence 9559	AI139764	EST	3645736
Sequence 9560	AI142414	EST	3658773
Sequence 9561	AI146833	EST	3674515
Sequence 9562	AI148106	EST	3675788
Sequence 9563	AI150430	EST	3678899
Sequence 9564	AI151146	EST	3679615
Sequence 9565	AI159774	EST	3693133
Sequence 9566	AI161072	EST	3694377
Sequence 9567	AI168316	EST	3701486
Sequence 9568	AI168348	EST	3701518
Sequence 9569	AI186453	EST	3737091
Sequence 9570	AI187157	EST	3737795
Sequence 9571	AI189475	EST	3740684
Sequence 9572	AI193372	EST	3744581
Sequence 9573	AI198218	EST	3750824
Sequence 9574	AI199191	EST	3751797
Sequence 9575	AI199194	EST	3751800
Sequence 9576	AI202137	EST	3754743
Sequence 9577	AI203214	EST	3755820
Sequence 9578	AI207471	EST	6361479
Sequence 9579	AI207868	EST	3769810
Sequence 9580	AI214048	EST	3777649
Sequence 9581	AI214453	EST	3778054
Sequence 9582	AI216098	EST	3785139

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Sequence 9583	AI217246	EST	3797061
Sequence 9584	AI244268	EST	3839665
Sequence 9585	AI248386	EST	3843783
Sequence 9586	AI249242	EST	3845771
Sequence 9587	AI251739	EST	3848268
Sequence 9588	AI261980	EST	3870183
Sequence 9589	AI262251	EST	3870454
Sequence 9590	AI267162	EST	3886329
Sequence 9591	AI267848	EST	3887015
Sequence 9592	AI268335	EST	3887502
Sequence 9593	AI268362	EST	3887529
Sequence 9594	AI270685	EST	3889852
Sequence 9595	AI275466	EST	3897740
Sequence 9596	AI276933	EST	3899201
Sequence 9597	AI277443	EST	3899711
Sequence 9598	AI278328	EST	3900596
Sequence 9599	AI279625	EST	3917859
Sequence 9600	AI280561	EST	3918794
Sequence 9601	AI281394	EST	3919627
Sequence 9602	AI283373	EST	3921606
Sequence 9603	AI283578	EST	3921811
Sequence 9604	AI284482	EST	3922715
Sequence 9605	AI290052	EST	3931718
Sequence 9606	AI290111	EST	3931777
Sequence 9607	AI290154	EST	3931820
Sequence 9608	AI291087	EST	3933861
Sequence 9609	AI292094	EST	3934868
Sequence 9610	AI298974	EST	3958628
Sequence 9611	AI333116	EST	4069675
Sequence 9612	AI334177	EST	4070736
Sequence 9613	AI334889	EST	4071816
Sequence 9614	AI337358	EST	4074285
Sequence 9615	AI339284	EST	4076211
Sequence 9616	AI341138	EST	4078065
Sequence 9617	AI341291	EST	4078218
Sequence 9618	AI342090	EST	4079017
Sequence 9619	AI343404	EST	4080610
Sequence 9620	AI344189	EST	4081395
Sequence 9621	AI348588	EST	4085794
Sequence 9622	AI349337	EST	4086543
Sequence 9623	AI349957	EST	4087163
Sequence 9624	AI350524	EST	4087730
Sequence 9625	AI352184	EST	4089390
Sequence 9626	AI355277	EST	4095430
Sequence 9627	AI356461	EST	4108082
Sequence 9628	AI357566	EST	4109187
Sequence 9629	AI357582	EST	4109203
Sequence 9630	AI360681	EST	4112302
Sequence 9631	AI361796	EST	4113417
Sequence 9632	AI373828	EST	4153694
Sequence 9633	AI378900	EST	4188753
Sequence 9634	AI379649	EST	4189502
Sequence 9635	AI381737	EST	4194518
Sequence 9636	AI381972	EST	4194753
Sequence 9637	AI393269	EST	4222816
Sequence 9638	AI420586	EST	4266517

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Sequence 9639	AI435112	EST	4300898
Sequence 9640	AI439421	EST	4304204
Sequence 9641	AI439588	EST	4305374
Sequence 9642	AI445716	EST	4290157
Sequence 9643	AI453049	EST	4307708
Sequence 9644	AI457432	EST	4310301
Sequence 9645	AI458254	EST	4310833
Sequence 9646	AI458599	EST	4311178
Sequence 9647	AI458758	EST	4311337
Sequence 9648	AI460220	EST	4313101
Sequence 9649	AI468419	EST	4330509
Sequence 9650	AI472084	EST	4334174
Sequence 9651	AI472566	EST	4325611
Sequence 9652	AI479075	EST	4372243
Sequence 9653	AI480254	EST	4373422
Sequence 9654	AI492032	EST	4393035
Sequence 9655	AI494037	EST	4395040
Sequence 9656	AI525541	EST	4439676
Sequence 9657	AI525654	EST	4439789
Sequence 9658	AI538842	EST	4452977
Sequence 9659	AI557226	EST	4489589
Sequence 9660	AI560973	EST	4511314
Sequence 9661	AI563921	EST	4522378
Sequence 9662	AI564719	EST	4523176
Sequence 9663	AI570615	EST	4533989
Sequence 9664	AI580252	EST	4564628
Sequence 9665	AI580336	EST	4564712
Sequence 9666	AI581098	EST	4565474
Sequence 9667	AI597918	EST	4606977
Sequence 9668	AI608796	EST	4617963
Sequence 9669	AI609087	EST	4618254
Sequence 9670	AI610880	EST	4620047
Sequence 9671	AI623984	EST	4648915
Sequence 9672	AI624751	EST	4649682
Sequence 9673	AI628354	EST	4665154
Sequence 9674	AI628417	EST	4665217
Sequence 9675	AI632470	EST	4683800
Sequence 9676	AI633000	EST	4684330
Sequence 9677	AI637826	EST	4690060
Sequence 9678	AI638561	EST	4690795
Sequence 9679	AI640607	EST	4703716
Sequence 9680	AI650583	EST	4734562
Sequence 9681	AI651877	EST	4735856
Sequence 9682	AI672492	EST	4852223
Sequence 9683	AI684595	EST	4895889
Sequence 9684	AI685930	EST	4897224
Sequence 9685	AI690089	EST	4901383
Sequence 9686	AI692658	EST	4969998
Sequence 9687	AI694944	EST	4982844
Sequence 9688	AI697185	EST	4985085
Sequence 9689	AI720354	EST	5037610
Sequence 9690	AI720743	EST	5037999
Sequence 9691	AI738670	EST	5100651
Sequence 9692	AI743182	EST	5111470
Sequence 9693	AI743921	EST	5112209
Sequence 9694	AI750105	EST	5128369

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Sequence 9695	AI751208	EST	5129472
Sequence 9696	AI751459	EST	5129723
Sequence 9697	AI751487	EST	5129751
Sequence 9698	AI752264	EST	5130528
Sequence 9699	AI752414	EST	5130678
Sequence 9700	AI752425	EST	5130689
Sequence 9701	AI760045	EST	5175712
Sequence 9702	AI761315	EST	5176982
Sequence 9703	AI765501	EST	5232010
Sequence 9704	AI766305	EST	5232814
Sequence 9705	AI767578	EST	5234087
Sequence 9706	AI767726	EST	5234235
Sequence 9707	AI792015	EST	5339731
Sequence 9708	AI795827	EST	5361287
Sequence 9709	AI797228	EST	5362700
Sequence 9710	AI800215	EST	5365687
Sequence 9711	AI806017	EST	5392583
Sequence 9712	AI807798	EST	5394364
Sequence 9713	AI808865	EST	5395431
Sequence 9714	AI810669	EST	5397235
Sequence 9715	AI814463	EST	5425678
Sequence 9716	AI814513	EST	5425728
Sequence 9717	AI815492	EST	5431038
Sequence 9718	AI816438	EST	5431984
Sequence 9719	AI818683	EST	5437762
Sequence 9720	AI819405	EST	5438484
Sequence 9721	AI828075	EST	5448746
Sequence 9722	AI863382	EST	5527489
Sequence 9723	AI873001	EST	5547050
Sequence 9724	AI873501	EST	5547550
Sequence 9725	AI874326	EST	5548375
Sequence 9726	AI884491	EST	5589655
Sequence 9727	AI884783	EST	5589947
Sequence 9728	AI885021	EST	5590185
Sequence 9729	AI887758	EST	5592922
Sequence 9730	AI888327	EST	5593577
Sequence 9731	AI888872	EST	5594036
Sequence 9732	AI903705	EST	6494092
Sequence 9733	AI904447	EST	6494834
Sequence 9734	AI906328	EST	6496715
Sequence 9735	AI910090	EST	6500770
Sequence 9736	AI914133	EST	5633988
Sequence 9737	AI918605	EST	5638460
Sequence 9738	AI924534	EST	5660498
Sequence 9739	AI927755	EST	5663719
Sequence 9740	AI929696	EST	5665660
Sequence 9741	AI936166	EST	5675036
Sequence 9742	AI950991	EST	5743301
Sequence 9743	AI970095	EST	5766921
Sequence 9744	AI972423	EST	5769339
Sequence 9745	AI982834	EST	5810053
Sequence 9746	AI982890	EST	5810109
Sequence 9747	AL035972	EST	5405602
Sequence 9748	AL036220	EST	5405817
Sequence 9749	AL036415	EST	5405971
Sequence 9750	AL037386	EST	5406786

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Sequence 9751	AL037968	EST	5928298
Sequence 9752	AL039569	EST	5408608
Sequence 9753	AL039961	EST	5408942
Sequence 9754	AL040667	EST	5409613
Sequence 9755	AL040692	EST	5409638
Sequence 9756	AL041673	EST	5421022
Sequence 9757	AL042613	EST	5935505
Sequence 9758	AL042680	EST	5422129
Sequence 9759	AL042725	EST	5422174
Sequence 9760	AL042986	EST	5935655
Sequence 9761	AL043210	EST	5935803
Sequence 9762	AL043542	EST	5422929
Sequence 9763	AL043672	EST	5423059
Sequence 9764	AL045757	EST	5936079
Sequence 9765	AL045793	EST	5433905
Sequence 9766	AL045936	EST	5434039
Sequence 9767	AL045937	EST	5936123
Sequence 9768	AL045976	EST	5434076
Sequence 9769	AL046015	EST	5434109
Sequence 9770	AL047001	EST	5435057
Sequence 9771	AL047332	EST	4727279
Sequence 9772	AL047890	EST	4728078
Sequence 9773	AL048554	EST	5936565
Sequence 9774	AL110421	EST	5866029
Sequence 9775	AL118756	EST	5924655
Sequence 9776	AL118845	EST	5924744
Sequence 9777	AL119809	EST	5925708
Sequence 9778	AL120711	EST	5926610
Sequence 9779	AL120865	EST	5926866
Sequence 9780	AL120911	EST	5926912
Sequence 9781	AL121473	EST	5927474
Sequence 9782	AL121558	EST	5927559
Sequence 9783	AL133779	EST	6601967
Sequence 9784	AL133900	EST	6602087
Sequence 9785	AL134724	EST	6602911
Sequence 9786	AL134795	EST	6602982
Sequence 9787	AL134938	EST	6603125
Sequence 9788	AL135007	EST	6603194
Sequence 9789	AL135023	EST	6603210
Sequence 9790	AL135290	EST	6603477
Sequence 9791	AL135343	EST	6603530
Sequence 9792	AL135362	EST	6603549
Sequence 9793	AL135502	EST	6603689
Sequence 9794	AL135600	EST	6603787
Sequence 9795	AL138042	EST	6854722
Sequence 9796	AW002442	EST	5849358
Sequence 9797	AW014499	EST	5863256
Sequence 9798	AW014727	EST	5863484
Sequence 9799	AW029611	EST	5888367
Sequence 9800	AW029642	EST	5888398
Sequence 9801	AW043897	EST	5904426
Sequence 9802	AW062837	EST	6014222
Sequence 9803	AW068104	EST	6023102
Sequence 9804	AW070431	EST	6025429
Sequence 9805	AW070690	EST	6025688
Sequence 9806	AW080672	EST	6035905

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Sequence 9807	AW084080	EST	6039232
Sequence 9808	AW118447	EST	6087031
Sequence 9809	AW148635	EST	6196531
Sequence 9810	AW149925	EST	6197821
Sequence 9811	AW157231	EST	6228632
Sequence 9812	AW160468	EST	6299501
Sequence 9813	AW160833	EST	6299866
Sequence 9814	AW161807	EST	6300840
Sequence 9815	AW161978	EST	6301011
Sequence 9816	AW162587	EST	6301620
Sequence 9817	AW162761	EST	6301794
Sequence 9818	AW162774	EST	6301807
Sequence 9819	AW163485	EST	6302518
Sequence 9820	AW163783	EST	6302816
Sequence 9821	AW175627	EST	6441768
Sequence 9822	AW177931	EST	6443968
Sequence 9823	AW178072	EST	6444109
Sequence 9824	AW194013	EST	6472742
Sequence 9825	AW237543	EST	6569932
Sequence 9826	AW239041	EST	6571431
Sequence 9827	AW239281	EST	6571671
Sequence 9828	AW245631	EST	6588624
Sequence 9829	AW245889	EST	6588882
Sequence 9830	AW245906	EST	6588899
Sequence 9831	AW245923	EST	6588916
Sequence 9832	AW246049	EST	6589042
Sequence 9833	AW246074	EST	6589067
Sequence 9834	AW247459	EST	6590452
Sequence 9835	AW247494	EST	6590487
Sequence 9836	AW249281	EST	6592274
Sequence 9837	AW250125	EST	6593118
Sequence 9838	AW250126	EST	6593119
Sequence 9839	AW263239	EST	6640055
Sequence 9840	AW270779	EST	6657809
Sequence 9841	AW273055	EST	6660085
Sequence 9842	AW274583	EST	6661613
Sequence 9843	AW292896	EST	6699532
Sequence 9844	AW292897	EST	6699533
Sequence 9845	AW293159	EST	6699795
Sequence 9846	AW294649	EST	6701285
Sequence 9847	AW294971	EST	6701607
Sequence 9848	AW296629	EST	6703265
Sequence 9849	AW303456	EST	6713145
Sequence 9850	AW327374	EST	6797869
Sequence 9851	AW327483	EST	6797978
Sequence 9852	AW340172	EST	6836798
Sequence 9853	AW340708	EST	6837334
Sequence 9854	AW360965	EST	6865615
Sequence 9855	AW361001	EST	6865651
Sequence 9856	AW361103	EST	6865753
Sequence 9857	AW361711	EST	6866361
Sequence 9858	AW362982	EST	6867632
Sequence 9859	AW363561	EST	6868211
Sequence 9860	AW364748	EST	6869502
Sequence 9861	AW364827	EST	6869386
Sequence 9862	AW365085	EST	6869735



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Sequence 9863	AW365852	EST	6870502
Sequence 9864	AW368293	EST	6872943
Sequence 9865	AW368461	EST	6873111
Sequence 9866	AW375589	EST	6880152
Sequence 9867	AW376917	EST	6881580
Sequence 9868	AW379827	EST	6884486
Sequence 9869	AW381227	EST	6885886
Sequence 9870	AW381248	EST	6885907
Sequence 9871	AW383599	EST	6888167
Sequence 9872	AW384101	EST	6888760
Sequence 9873	AW384915	EST	6889574
Sequence 9874	AW385192	EST	6889851
Sequence 9875	AW385322	EST	6889981
Sequence 9876	AW385328	EST	6889987
Sequence 9877	AW388939	EST	6893598
Sequence 9878	AW392421	EST	6897080
Sequence 9879	AW393095	EST	6897754
Sequence 9880	AW401915	EST	6920601
Sequence 9881	AW402136	EST	6920822
Sequence 9882	AW402676	EST	6921388
Sequence 9883	AW404132	EST	6923189
Sequence 9884	AW405567	EST	6924624
Sequence 9885	AW407212	EST	6926269
Sequence 9886	AW408274	EST	6927331
Sequence 9887	AW408423	EST	6927480
Sequence 9888	AW410520	EST	6936061
Sequence 9889	AW410772	EST	6936313
Sequence 9890	AW411211	EST	6936752
Sequence 9891	AW411217	EST	6936758
Sequence 9892	AW474433	EST	7044539
Sequence 9893	AW498895	EST	7137236
Sequence 9894	AW500117	EST	7112425
Sequence 9895	AW500758	EST	7113663
Sequence 9896	AW501342	EST	7114784
Sequence 9897	AW501373	EST	7114844
Sequence 9898	AW501390	EST	7114878
Sequence 9899	AW501401	EST	7114900
Sequence 9900	AW501421	EST	7114936
Sequence 9901	AW515416	EST	N/A
Sequence 9902	AW578462	EST	7253511
Sequence 9903	AW578582	EST	7253631
Sequence 9904	AW582604	EST	7257653
Sequence 9905	AW583629	EST	7260587
Sequence 9906	C04057	EST	1467308
Sequence 9907	F06849	EST	672465
Sequence 9908	F09531	EST	682064
Sequence 9909	F11462	EST	705760
Sequence 9910	F12434	EST	706790
Sequence 9911	H01873	EST	864806
Sequence 9912	H08043	EST	872865
Sequence 9913	H08093	EST	872915
Sequence 9914	H09228	EST	874050
Sequence 9915	H09317	EST	874139
Sequence 9916	H09793	EST	874615
Sequence 9917	H10561	EST	875383
Sequence 9918	H10893	EST	875713

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Sequence 9919	H11277	EST	876097
Sequence 9920	H15211	EST	880031
Sequence 9921	H16865	EST	883105
Sequence 9922	H22726	EST	891421
Sequence 9923	H26047	EST	895170
Sequence 9924	H29998	EST	900908
Sequence 9925	H30612	EST	901522
Sequence 9926	H62143	EST	1014975
Sequence 9927	H69585	EST	1039791
Sequence 9928	H70297	EST	1040503
Sequence 9929	H86644	EST	1068223
Sequence 9930	H99096	EST	1123764
Sequence 9931	M85706	EST	274353
Sequence 9932	N26971	EST	1141319
Sequence 9933	N28905	EST	1147141
Sequence 9934	N28944	EST	1147180
Sequence 9935	N34003	EST	1154403
Sequence 9936	N34221	EST	1155363
Sequence 9937	N36764	EST	1157906
Sequence 9938	N42722	EST	1167152
Sequence 9939	N43012	EST	1166756
Sequence 9940	N46795	EST	1187961
Sequence 9941	N54326	EST	1195646
Sequence 9942	N57253	EST	1201143
Sequence 9943	N95531	EST	1267800
Sequence 9944	R17855	EST	771465
Sequence 9945	R19920	EST	774554
Sequence 9946	R34894	EST	791795
Sequence 9947	R35355	EST	792256
Sequence 9948	R35487	EST	792388
Sequence 9949	R50695	EST	812597
Sequence 9950	R52763	EST	814665
Sequence 9951	R53255	EST	815157
Sequence 9952	R59084	EST	829779
Sequence 9953	R69898	EST	843415
Sequence 9954	R73759	EST	848129
Sequence 9955	R84545	EST	942951
Sequence 9956	R88895	EST	953722
Sequence 9957	R89026	EST	953853
Sequence 9958	R93920	EST	969315
Sequence 9959	T05548	EST	316698
Sequence 9960	T08921	EST	389949
Sequence 9961	T11899	EST	596603
Sequence 9962	T18975	EST	601018
Sequence 9963	T19025	EST	601068
Sequence 9964	T32930	EST	615028
Sequence 9965	T63081	EST	666738
Sequence 9966	T77019	EST	694222
Sequence 9967	T84756	EST	713108
Sequence 9968	W02349	EST	1274356
Sequence 9969	W03691	EST	1275555
Sequence 9970	W07619	EST	1281621
Sequence 9971	W27890	EST	1307838
Sequence 9972	W28867	EST	1308878
Sequence 9973	W38913	EST	1320619
Sequence 9974	W38916	EST	1320622

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Sequence 9975	W39482	EST	1321190
Sequence 9976	W52153	EST	1349763
Sequence 9977	W60983	EST	1367742
Sequence 9978	W69356	EST	1378667
Sequence 9979	W72044	EST	1382314
Sequence 9980	W76216	EST	1386441
Sequence 9981	W79237	EST	1390368
Sequence 9982	W80613	EST	1391700
Sequence 9983	W81613	EST	1392652
Sequence 9984	W88815	EST	1404287
Sequence 9985	W95032	EST	1424152
Sequence 9986	Z25224	EST	395863
Sequence 9987	Z42427	EST	565844
Sequence 9988	Z45029	EST	574221
Sequence 9989	Z45988	EST	575222
Sequence 9990	Z78343	EST	1495116
Sequence 9991	Q46540	NUCPATENT	N/A
Sequence 9992	Q84560	NUCPATENT	N/A
Sequence 9993	T33624	NUCPATENT	N/A
Sequence 9994	T71086	NUCPATENT	N/A
Sequence 9995	T94119	NUCPATENT	N/A
Sequence 9996	V04699	NUCPATENT	N/A
Sequence 9997	V05728	NUCPATENT	N/A
Sequence 9998	V34175	NUCPATENT	N/A
Sequence 9999	V34185	NUCPATENT	N/A
Sequence 10000	V35457	NUCPATENT	N/A
Sequence 10001	V36303	NUCPATENT	N/A
Sequence 10002	V41451	NUCPATENT	N/A
Sequence 10003	V58631	NUCPATENT	N/A
Sequence 10004	V84411	NUCPATENT	N/A
Sequence 10005	V84546	NUCPATENT	N/A
Sequence 10006	V87058	NUCPATENT	N/A
Sequence 10007	V89685	NUCPATENT	N/A
Sequence 10008	V90259	NUCPATENT	N/A
Sequence 10009	V99828	NUCPATENT	N/A
Sequence 10010	X00616	NUCPATENT	N/A
Sequence 10011	X05715	NUCPATENT	N/A
Sequence 10012	X37479	NUCPATENT	N/A
Sequence 10013	X40381	NUCPATENT	N/A
Sequence 10014	X61430	NUCPATENT	N/A
Sequence 10015	X77342	NUCPATENT	N/A
Sequence 10016	X80672	NUCPATENT	N/A
Sequence 10017	X87868	NUCPATENT	N/A
Sequence 10018	X91484	NUCPATENT	N/A
Sequence 10019	X97576	NUCPATENT	N/A
Sequence 10020	X97718	NUCPATENT	N/A
Sequence 10021	X97772	NUCPATENT	N/A
Sequence 10022	X98309	NUCPATENT	N/A
Sequence 10023	X98400	NUCPATENT	N/A
Sequence 10024	X98781	NUCPATENT	N/A
Sequence 10025	X99117	NUCPATENT	N/A
Sequence 10026	Z00428	NUCPATENT	N/A
Sequence 10027	Z14314	NUCPATENT	N/A
Sequence 10028	Z14685	NUCPATENT	N/A
Sequence 10029	Z15023	NUCPATENT	N/A
Sequence 10030	Z24893	NUCPATENT	N/A

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Sequence 10031	Z27237	NUCPATENT	N/A
Sequence 10032	Z29638	NUCPATENT	N/A
Sequence 10033	Z38853	NUCPATENT	N/A
Sequence 10034	Z39903	NUCPATENT	N/A
Sequence 10035	Z41312	NUCPATENT	N/A
Sequence 10036	Z52414	NUCPATENT	N/A
Sequence 10037	Z52416	NUCPATENT	N/A
Sequence 10038	Z53013	NUCPATENT	N/A
Sequence 10039	Z57842	NUCPATENT	N/A
Sequence 10040	Z60383	NUCPATENT	N/A
Sequence 10041	Z65271	NUCPATENT	N/A
Sequence 10042	Z80193	NUCPATENT	N/A
Sequence 10043	Z80472	NUCPATENT	N/A
Sequence 10044	Z97065	NUCPATENT	N/A
Sequence 10045	Z97145	NUCPATENT	N/A
Sequence 10046	Z97322	NUCPATENT	N/A
Sequence 10047	AC05588	PREPATNUC	N/A
Sequence 10048	AC37772	PREPATNUC	N/A
Sequence 10049	AC38092	PREPATNUC	N/A
Sequence 10050	AC38120	PREPATNUC	N/A
Sequence 10051	AC38948	PREPATNUC	N/A
Sequence 10052	AC39251	PREPATNUC	N/A
Sequence 10053	AC39528	PREPATNUC	N/A
Sequence 10054	AC39561	PREPATNUC	N/A

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Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTAAGTCTGCGTGGCCGCTCCGCTGTTGTGTGGCCTGGGCCGCAA  
A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCCGAA  
TCCCAGAGCTGGAAACATCTTATCACTGTCGTAGTCTGAATGATCTGCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGCTGAACTGCGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGCGAGAAGCTTTTGAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAACCCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCTGAGAATCACTTTGTCATANAGATCCAGAAAAATAT  
TGACTGTATGTCAGGCCCATGTCCTTTTGGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCCTCAACAGAACTTTTCATCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAACTTTGGCACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAATAACCTNTCCTCCAGTGCATGGAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCGGCCTCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCCCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGTCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAAATCAAAGTGGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTGAGGGTGGGGGGCGCAGGTCAAGCTTTCACCAGTTTT  
TAATTCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTCGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTCACAAG  
A

AGGTGGCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAAACTTCATTAATAACTGCTTGAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTTAAATAATTCAAACATTTTGGGATGTCACGGCCAATGGAATTTGGA  
GAAAGCTTTGGATATTTTTATTAGTTTTCTTCTTAATCGATTAAGTTGAGGCATTATT  
TCTGGAACAGCTACGTAAAAGTCTGCAACAATTTTCATCATCCCAAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAATGCAGCTCCATTTTCTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAACCTAANAAC  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTTCCAGTGCCATATNCAGTGTCAAATCAA

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ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAAGGAGAGGAAGCGTTCACCGCCACAAATCATAAAATGGACA  
TGA CTGTGGAGTCTTACAGTTCAGGGTTCTTTTATTACGTCCTTCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGTTAATTTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A  
GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCAACTTATGGAAC  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTTGGCTACGAGCCAACCATCTATTACCCCAAAGGCC  
TAACAAGCCCCCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACGTGTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTTCGGGAAC

Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTACTGCGTGGCCGTCCGCTGTTGTGTGGCCTGGGCCGCAA  
A  
CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCGAA  
TCCCAGAGCTGGAACATCTTATCACTGTCGTAGTCTGAATGATCTGCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGTCTGAACTGCGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGAGAGCTTTTGAAGTTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAACCCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCTGAGAATCACTTTGTCCATANAGATCCAGAAAAATAT  
TGACTGTATGTCAGGCCCATGTCCTTTTGGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCCTCAACAGAACTTTTATCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAACTTTGGCACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAATAACCTNTCCTCCAGTGCATGGAAAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTGAAGCCACCACAGTGTCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAATCAAAGTGGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTCAGGGGTGGGGGGCGCAGGTCAAGCTTTCACCAGTTTT  
TAATTCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTACAAG  
A  
AGGTGGCCCCGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAACTTCATTAATAACTGCTTGAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTTAAATAATTCAAACATTTTGGGGATGTCACGGCCAATGGAATTTGAA  
GAAAGCTTTGGATATTTTTTATTAGTTTCTTCTTAATCGATTAAGTTCAGGCATTATT  
TCTGGAACAGCTACGTAAGTCTGCAACAATTTTCATCATCCCAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAATGCAGCTCCATTTTCTTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAACATAA  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTTCCAGTGCCATATNCAGTGTCAAATCAA

Table 3-4

ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAGGAGAGGAAGCGTTCACCGCCACAAATCATAAAATGGACA  
TGA CTGTGGAGTCTTACAGTTCAGGGTCTTTTATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGGTAAATTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTCTTTTGGGT  
ATAAATGGGCAATTGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A

GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCACTTATGGAAT  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTGGCTACGAGCCAACCATCTATTACCCCAAAGGCC  
TAACAAGCCCCTCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACTGTTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTTCGGGAAC



Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTAAGTCTGCGTGGCCGTCCGCTGTTGTGTGGCCTGGGCCGCAA  
A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCGAA  
TCCCAGAGCTGGAAACATCTTATCACTGTCTAGTCTGAATGATCTGCCCAACAGCCCA  
GATGGCCGACAGATATTCTGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGTCTGAACTGCGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGCAGAAGCTTTTGAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAACCCCTGTGA  
CATCGTCTTTTCTAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCTGAGAATCACTTTGTCATANAGATCCAGAAAAATAT  
TGACTGTATGTCAGGCCCATGTCCTTTGGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCCTCAACAGAACTTTTCTGCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAACCTTTGGCACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAATAACCTNTCCTCCAGTGCATGGAAAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGTCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAAATCAAAGTGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTGAGGGGTGGGGGGCGCAGGTCAAGCTTTCACCAGTTTT  
TAATTCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTCTGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCCAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTCAACAAG  
A

AGGTGGCCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAACTTCATTAATAACTGCTTGCAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTTAAATAATTCAAACATTTTGGGGATGTCACGGCCAATGGAATTTGGA  
GAAAGCTTTGGATATTTTTATTAGTTTCTCCTTAATCGATTAAGTTCAGGCATTATT  
TCTGGAACAGCTACGTAAGAGTCTGCAACAATTTTCATCATCCCAAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAATGCAGCTCCATTTTCTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAATAANAAC  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTCCAGTGCCATATNCAGTGTCAAATCAA

Table 3-4

ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAAGGAGAGGAAGCGTTCACCGCCACAAATCATAAAATGGACA  
TGACTGTGGAGTCTTACAGTTCAGGGTTCCTTCATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGGTTAATTTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A  
GGCCGTGGACCAGGAGCTATTTAACGAATACCAAGTTCAGCGTGGACCAACTTATGGAAC  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTTGGCTACGAGCCAACCATCTATTACCCCAAAGGCC  
TAACAAGCCCCCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACGTGTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTCTGGGAAC

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Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTAAGTACTGCGTGGCCGTCCGCTGTTGTGTGGCCTGGGCCGCAA  
A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACATCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCCGAA  
TCCCAGAGCTGGAAACATCTTATCACTGTCGTAGTCTGAATGATCTGCCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGTCTGAAGTGGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGCAGAAGCTTTTGAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAACCCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCTTGAGAATCACTTTGTGCATANAGATCCAGAAAAATAT  
TGAAGTGTATGTCAGGCCCATGTCCTTTTGGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCTCAACAGAACTTTTCTGCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAAGTGGGACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAAATAACCTNTCCTCCAGTGCATGGAAAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGTCTAGTAATGAAACCTACCAGGAACGCTTGGA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCCCTCAAATCAAAGTGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTGAGGGGTGGGGGGCGCAGGTCAAGCTTTCACCAGTTTT  
TAATTCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTTCGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGAGCCACACGCCAAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTCAACAAG  
A

AGGTGGCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAACTTCATTAATAACTGCTTGAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTTAAATAATTCAAACATTTTGGGGATGTCACGGCCAATGGAATTTGGA  
GAAAGCTTTGGATATTTTTTATTAGTTTCTTCTTAATCGATTAAGTTCAGGCATTATT  
TCTGGAACAGCTACGTAAGTCTGCAACAATTTTCATCATCCCAAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAATGCAGCTCCATTTTCTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAACATAAAT  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTCCAGTGCCATATNCAGTGTCAAATCAA

**Table 3-4**

ANAAAACACTTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAGGAGAGGAAGCGTTCACCGCCACAAATCATAAAATGGACA  
TGA CTGTGGAGTCTTACAGTTCAGGGTTCTTTCATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGGTTAATTTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A

GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCAACTTATGGAAC  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTGGCTACGAGCCAACCATCTATTACCCAAAAGGCC  
TAACAAGCCCCTCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCCT  
TGGGGAATGCCCGCAGAGCCCATGACGATTGATGAACTGTTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTGCGGAAC

# Table 3-4

Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTAAGTCTGCGTGGCCGCTCCGCTGTTGTGTGGCCTGGGCCGCAA  
A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCGAA  
TCCCAGAGCTGGAACATCTTATCACTGTCGTAGTCTGAATGATCTGCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGTCTGAACTGCGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGCGAGAAGCTTTTGAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCCGACTCTGCTGGCAAACCCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCTGAGAATCACTTTGTCATANAGATCCAGAAAAATAT  
TGACTGTATGTCAGGCCCATGTCCTTTTGGGGAGGTTTCAAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCTCAACAGAACTTTTCTCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAACTTTGGCACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAATAACCTNTCCTCCAGTGCATGGAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGTCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGAGTCAACAGGAGTCTGTAAGCTGTAAGGACACAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGTCTGTAAGCTGTAAGCTCAAGCTGGTTGGCATGGAG  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAAATCAAAGTGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTCAGGGGTGGGGGGCGCAGGTCAAGCTTTCACCAAGTTTT  
TAATTCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTACAAG  
A

AGGTGGCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAACTTCATTAATAACTGCTTGAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTTAAATAATTCAAACATTTTGGGATGTCACGGCCAATGGAATTTGGA  
GAAAGCTTTGGATATTTTTTATTAGTTTCTTCTTAATCGATTAAGTTCAGGCATTATT  
TCTGGAACAGCTACGTAAAGTCTGCAACAATTTTCATCATCCCAAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAATGCAGCTCCATTTTCTTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAACCTAANAAC  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTCCAGTGCCATATNCAGTGTCAAATCAA

Table 3-4

ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAGGAGAGGAAGCGTTACACGCCACAAATCATAAAATGGACA  
TGA CTGTGGAGTCTTACAGTTCAGGGTTCTTTCATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTACCACATCAATAGGACTTTTTATGCGTCCGGGTTAATTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A  
GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCAACTTATGGA  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTGGCTACGAGCCAACCATCTATTACCCCAAAGGCC  
TAACAAGCCCCCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACTGTTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTCCGGAAC

Table 3-4

Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTACTGCGTGGCCGTCGCTGTTGTGTGGCCTGGGCCGCAA

A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCCGAA  
TCCCAGAGCTGGAAACATCTTATCACTGTCGTAGTCCTGAATGATCTGCCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGTCTGAACTGCGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGAGAGCTTTTGAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAAACCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCCTGAGAATCACTTTGTCATANAGATCCAGAAAAATAT  
TGAATGTATGTCAGGCCCATGTCCTTTGGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCCTCAACAGAACTTTTATCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAACTTTGGCACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAAATAACCTNTCCTCCAGTGCATGGAAAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGCTGCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAAATCAAAGTGGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTCAGGGGTGGGGGGCGCAGGTCAAGCTTTCACCAGTTTT  
TAATTCCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTTCGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCCAAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTCAACAAG

A

AGGTGGCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAACTTCATTAATAACTGCTTGCAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTAAATAATTCAAACATTTTGGGGATGTCACGGCCAATGGAATTTGGA  
GAAAGCTTTGGATATTTTATTCAGTTTCTTCTTAATCGATTAAAGTTCAGGCATTATT  
TCTGGAACAGCTACGTAAGAGTCTGCAACAATTTATCATCCCAAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAAATGCAGCTCCATTTTCTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAATAANAAC  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTCCAGTGCCATATNCAGTGTCAAAATCAA

Table 3-4

ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAAGGAGAGGAAGCGTTCACCGCCACAAATCATAAAATGGACA  
TGACTGTGGAGTCTTACAGTTCAGGGTCTTTTCATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGGTTAATTTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A  
GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCAACTTATGGAAC  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTGGCTACGAGCCAACCATCTATTACCCAAAAGGCC  
TAACAAGCCCCCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACTGTTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTCGGGAAC



Table 3-4

Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTACTGCGTGGCCGTCGCTGTTGTGTGGCCTGGGCCGCAA  
A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAACCTGGGCCCCGAA  
TCCCAGAGCTGGAACATCTTATCACTGTCGTAGTCCTGAATGATCTGCCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGTCTGAACTGCGGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGCGGGGAGAAAGCTTTTGAAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAAACCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCCTGAGAATCACTTTGTCATANAGATCCAGAAAAATAT  
TGACTGTATGTCAGGCCCATGTCCTTTTGGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCCTCAACAGAACTTTTCTGCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAACTTTGGCACTGTAAGGGTTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAATAACCTNTCCTCCAGTGCATGGAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGCTGCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGAGAAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAAATCAAAGTGAAGAGTTTGGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTCAGGGGTGGGGGGCGCAGGTCAAGCTTTACCAGTTTT  
TAATTCCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTTCGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCAAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTCACAAG  
A

AGGTGGCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAAACTTCATTAATAACTGCTTGCAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAATT  
TCATGTCCATTTTAAATAATTCAAACATTTTGGGGATGTCACGGCCAATGGAATTTGGA  
GAAAGCTTTGGATATTTTATTGAGTTTCTTCTTAATCGATTAAAGTTTCAGGCATTATT  
TCTGGAACAGCTACGTAAAAGTCTGCAACAATTTTCATCATCCCAAATCTTCTGTATCAGA  
CTAAGTGCCCTCCTGCAAATGCAGCTCAATTTTCTCCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAATAANAAC  
ACTGGTAAATGGCTTCACGTTTTTCTTNTTTCCAGTGCCATATNCAGTGTCAAATCAA

**Table 3-4**

ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAGGAGAGGAAGCGTTCACCGCCACAAATCATAAAATGGACA  
TGA CTGTGGAGTCTTACAGTTCAGGGTTCTTTCATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGGTTAATTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A

GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCAACTTATGGA  
GGCCGGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTGGCTACGAGCCAACCATCTATTACCCCAAAGGCC  
TAACAAGCCCCTCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACTGTTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTTCGGGAAC

**Table 3-4**

Sequence 10047: Found in patent publication WO99/09061

CCCGCGGTGGCGGCCGAGGTAAGTCTGCGTGGCCGTCCGCTGTTGTGTGGCCTGGGCCGCAA  
A

CCGGGCCACGTGGTTGACAATGGGGGAGAAATTGGTAGGACCGTAGAAGCGGATGTGGGG  
CAGGCAAGCTGAGTACGCTGGGCAATACCATCCACACCTGAGCAGAAGGGGTTGGTGGG  
GTTGAAGTTGATGGCAAACCTCATGGGAGACCTTCCAGTCTGGGGGTAAGTGGGCCCGAA  
TCCCAGAGCTGGAAACATCTTATCACTGTCGTAGTCTGAATGATCTGCCCAACAGCCCA  
GATGGCCGACAGATATTCGTTGGTGCCCATAGGGTTGATATANTGCAAAGAGGAAGGGTC  
GAGGGGATTCCCGTTGGAGGCTGTAAAGTCTATTCCAACGGTGAACATGAGCTGGCAGCC  
TCCCAGGACGTAGTCAAGGAAGGAGTAGT

Sequence 10048: Found in patent publication WO00/06698

CCGCGGTGGCGGCCGAGGCTGAAGTCTGCGGGTCTCTATCGCACTGCTAGGGGTTCTGCT  
GCTGGGTGCGGCGCGCCTGCCGCGGGGAGAGCTTTTGGAGATTGCTCTGCCACGAGA  
AAGCAACATTACAGTTCTCATAAAGCTGGGGACCCGACTCTGCTGGCAAAACCCTGTTA  
CATCGTCTTTTCTAAAAGACATATAACCATGTTGTCCATCAAGTCTGGAGAAAGAATAGT  
CTTTACCTTTAGCTGCCAGAGTCTGAGAATCACTTTGTTCATANAGATCCAGAAAAATAT  
TGAAGTGTATGTCAGGCCCATGTCCTTTTGGGAGGTTGAGCTTCAGCCCTCGACATCGTT  
GTTGCCTACCCTCAACAGAACTTTTCATCTGGGATGTCAA

Sequence 10049: Found in patent publication WO00/06698

TGATCTTCAGCTGCTCCTGAAGTCTGCGGGTCTCTGTATCGTATGGTGGTG  
ACAAAGCTTTTAAATAACCTNTCCTCCAGTGCATGGAAAAGGACTGGAGTATTTATNAA  
GT

Sequence 10050: Found in patent publication WO00/06730

ACTTGTGAGCCTGGACTGGCTTCCCCGGCCTCTACATGAACCCCTTCCCGGTGCTCCAT  
CTCATCGAGGACTTGAGGCTGGCCTTGGAGATGCTGGAGCTTCTCAGGAGAGAGCAGCC  
CTCCTGAGCCAGATCCCTGGCCCAACAGCTGCCTACATAAAGGAATGGTTTGAAGAGAGC  
TTGTCCCAGGTAAGCCACCACAGTGTCTAGTAATGAAACCTACCAGGAACGCTTGGCA  
CGTCTAGAAGGGGATAAGGAGTCCCTCATATTGCAGGTGAGTGTCTCACAGACCAAGTA  
GAAGCCCAGGGAGAAAAGATTGAGACCTGGAAGTGTGTCTGGAAGGACACCAGGTGAAA  
CTCAATGCTGCTGAAGAGATGCTTCAACAGGAGCTGCTAAGCCGCACATCTCTTGAGACC  
CAGAAGCTCGATCTGATGACTGAAGTGTCTGAGCTGAAGCTCAAGCTGGTTGGCATGGAG  
AAGGAGCAGAGAGAGCAGGAGGAGCAGAGAAAAGCAGAGGAGTTACTGCAAGAGCTC  
AGGCCCTCAAAATCAAAGTGGAAGAGTTTGAAA

Sequence 10051: Found in patent publication WO00/11171

GGGAGTGGAGCGGTGAACACGTCAGGGGTGGGGGGCGCAGGTCAAGCTTTCACCAGTTTT  
TAATTCTTTGATGGGGTAAATTTGAGCAATTTTCTCGACTTGTGACATTTCGTTATTAAC  
TGANCAGGAATCAGGANAGGAACCCGGTCTCTCCACACAGCCAGCANAGAGCCTACGA  
CTAGATTTGCATCTTTACGTCCTGCGCGGAGGCTGCTACACACATGCANAAGTCATGCTG  
GTGGCCTGGACATTGAAGGGAGAGAAGTGGATTTGGGAGACATTTAGGAGGCACCGAAAG  
CGAAGGAAGCTCCTGCTCCTCTAAAGCCGAAGCCAAAGCAAAGGCTTTAAAGGCCAAGA  
AGGCAGTGTTGAAAGGTGTCCGCAGCCACACGCAAAAAAGAGGATCCGCATGTCACTCAC  
CT

Sequence 10052: Found in patent publication WO00/15799

ACCGCGGGGGCGGCCGNGNNTTCNGCCTGGAGGAGCTCAGGGTGGCCGGCATTCAAG  
A

AGGTGGCCCGGACCATCGGCATTTCTGTGGATCCGAGGAGGCGGAACAAGTCCACGGAGT  
CCCTGCAGACCAACGTGCAGCGGCTGAAGGAGTACCACAAAGGGACCCAAATTCAGCGGT  
CTGTGCCTACAAACTTCATTAATAACTGCTTGCAGATTGGCAGCTATCTGGTCACTTGAC  
ATATCCAATGTTGCTATTTTGGTCTGGAGAAAGTTCTCCCTTTCTTCATCTACCTTAAT  
TCATGTCCATTTTAAATAATTCAAACATTTTGGGGATGTCACGGCCAATGGAATTTTGA  
GAAAGCTTTGGATATTTTATTCAGTTTCTTCTTAATCGATTAAAGTTCAAGGCATTATT  
TCTGGAACAGCTACGTAAAGTCTGCAACAATTTTCATCATCCCAATCTTCTGTATCAGA  
CTAAGTGCCTCCTGCAATGCAGCTCCATTTTCTTCGCTATTTTGACCTCTGATGCATT  
CTCTGTAAATACAGCAACTTTATTGATTTCCGAAGCCAATGGGTATGGCAAATAANAAC  
ACTGGTAAATGGCTTCACGTTTTTCTNTTTTCCAGTGCCATATNCAGTGTCAAATCAA

Table 3-4

ANAAAACACTTTGCTTTGGACTAGTTAAAGCCAANAATTTGA

Sequence 10053: Found in patent publication WO00/06698

ACATCTTCCAGGACAAGGTAAACTCTGACATGCACTAGGTATGTGCAGATCCCGGCCCT  
GCCACCCAGCCTCATGCAAGTCATCCCCGACATGACCTTCACGACCGCAATGCAAGGAGG  
GGAAGAAAGTCACAGCACTGATGAGGACAGCTGCAGAGGTGGCAGTGTGTGGACACAGGA  
AGTTTGGGCCCCCTCCCTGCCCCAGCTTTCCTAGGCCAGAATTGTGTTTGGCAGTAATTG  
TCTGTTTAAAAAATAAAAAAGGAGAGGAAGCGTTCCACCGCCACAAATCATAAAATGGACA  
TGACTGTGGAGTCTTACAGTTCAGGGTTCTTTCATTACGTCCCTTCCTGTCTCGGTCTG  
CGGTCTTTACCACATCAATAGGACTTTTTATGCGTCCGGGTTAATTTTTCACTCCAGTGC  
GTCCTGTTGCAGGGACCGGAGCTGATGGGAGCTGCTTCTCCCCATGCCTCACTGGTCCCA  
GATCANGGCTTCAGGGACAGATGATGAGTCTCAAACGAGCCANCAGGGGTTCTTTGGGT  
ATAAATGGGCAATTCGNCCTGTCTTAAGNCTGATGACCTCANCCGTGGTTTTTGGAT

Sequence 10054: Found in patent publication WO00/18922

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGAGCCAGGAGGAGGCC  
A  
GGCCGTGGACCAGGAGCTATTTAACGAATACCAGTTCAGCGTGGACCAACTTATGGAAT  
GGCCGGGCTGAGCTGTGCTACAGCCATCGCCAAGGCATATCCCCCACGTCCATGTCCAG  
GAGCCCCCTACTGTCCTGGTCATCTGTGGCCCGGGAATAATGGAGGAGATGGTCTGGT  
CTGTGCTCGACACCTCAAACCTTTGGCTACGAGCCAACCATCTATTACCCCAAAGGCC  
TAACAAGCCCCTCTTCACTGCATTGGTGACCCAGTGTGAGAAAATGGACATCCCTTTCCT  
TGGGGAAATGCCCGCAGAGCCCATGACGATTGATGAACTGTTGAGCTGGTGGTGGATGCC  
ATCTTTGGCTTCAGCTTCAAGGGCGATGTTTCGGGAAC

**Table 3-5**

Sequence #	Acc No	Database hit	GI Nbr
Sequence 10055	A02759	Genbank	345130
Sequence 10056	A36501	Genbank	2293812
Sequence 10057	A38056	Genbank	2294706
Sequence 10058	A46722	Genbank	2300822
Sequence 10059	A98295	Genbank	6781400
Sequence 10060	AB000584	Genbank	1813326
Sequence 10061	AB000888	Genbank	2467297
Sequence 10062	AB002323	Genbank	2224590
Sequence 10063	AB002337	Genbank	6683125
Sequence 10064	AB002383	Genbank	2224710
Sequence 10065	AB002533	Genbank	1944124
Sequence 10066	AB003102	Genbank	1945608
Sequence 10067	AB004064	Genbank	6983841
Sequence 10068	AB004885	Genbank	2217932
Sequence 10069	AB006534	Genbank	2924619
Sequence 10070	AB007170	Genbank	3077765
Sequence 10071	AB007956	Genbank	3413930
Sequence 10072	AB007964	Genbank	3413939
Sequence 10073	AB008226	Genbank	3370992
Sequence 10074	AB011004	Genbank	3273315
Sequence 10075	AB011083	Genbank	3043545
Sequence 10076	AB011100	Genbank	6683714
Sequence 10077	AB011120	Genbank	3043619
Sequence 10078	AB011165	Genbank	3043709
Sequence 10079	AB011399	Genbank	3452571
Sequence 10080	AB014511	Genbank	3327035
Sequence 10081	AB014570	Genbank	3327153
Sequence 10082	AB014579	Genbank	3327171
Sequence 10083	AB014583	Genbank	6635130
Sequence 10084	AB015639	Genbank	5821139
Sequence 10085	AB015798	Genbank	6681591
Sequence 10086	AB016089	Genbank	5821146
Sequence 10087	AB018257	Genbank	3882148
Sequence 10088	AB018274	Genbank	3882182
Sequence 10089	AB018284	Genbank	3882202
Sequence 10090	AB018304	Genbank	3882242
Sequence 10091	AB018330	Genbank	3882294
Sequence 10092	AB018340	Genbank	3882314
Sequence 10093	AB019564	Genbank	3885367
Sequence 10094	AB019568	Genbank	3885371
Sequence 10095	AB020335	Genbank	6518494
Sequence 10096	AB020676	Genbank	4240226
Sequence 10097	AB020683	Genbank	4240240
Sequence 10098	AB020694	Genbank	4240262
Sequence 10099	AB020864	Genbank	4003384
Sequence 10100	AB020867	Genbank	4003387
Sequence 10101	AB021179	Genbank	4062855
Sequence 10102	AB021467	Genbank	4586518
Sequence 10103	AB021663	Genbank	4996450
Sequence 10104	AB023050	Genbank	5672605
Sequence 10105	AB023051	Genbank	5672606
Sequence 10106	AB023140	Genbank	4589477
Sequence 10107	AB023208	Genbank	4589625
Sequence 10108	AB024334	Genbank	6016837
Sequence 10109	AB025355	Genbank	5103146

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Sequence 10110	AB025959	Genbank	6520072
Sequence 10111	AB026894	Genbank	5821423
Sequence 10112	AB027466	Genbank	6172220
Sequence 10113	AB028624	Genbank	5103045
Sequence 10114	AB028859	Genbank	6567165
Sequence 10115	AB028893	Genbank	6552364
Sequence 10116	AB028975	Genbank	5689440
Sequence 10117	AB029001	Genbank	5689492
Sequence 10118	AB029025	Genbank	5689540
Sequence 10119	AB031052	Genbank	6978947
Sequence 10120	AB032957	Genbank	6329818
Sequence 10121	AB032959	Genbank	6329832
Sequence 10122	AB032982	Genbank	6330122
Sequence 10123	AB033017	Genbank	6330344
Sequence 10124	AB033050	Genbank	6330623
Sequence 10125	AB033074	Genbank	6330846
Sequence 10126	AB033079	Genbank	6382025
Sequence 10127	AB034205	Genbank	6899845
Sequence 10128	AB034206	Genbank	6177737
Sequence 10129	AB035207	Genbank	6469033
Sequence 10130	AB037740	Genbank	7243018
Sequence 10131	AB037763	Genbank	7243064
Sequence 10132	AB037767	Genbank	7243072
Sequence 10133	AB037817	Genbank	7243172
Sequence 10134	AB037850	Genbank	7243238
Sequence 10135	AC000049	Genbank	5705995
Sequence 10136	AC000064	Genbank	1669369
Sequence 10137	AC000080	Genbank	7123907
Sequence 10138	AC000120	Genbank	1809224
Sequence 10139	AC000353	Genbank	6970735
Sequence 10140	AC000378	Genbank	2270906
Sequence 10141	AC000394	Genbank	2133911
Sequence 10142	AC001226	Genbank	2133862
Sequence 10143	AC001642	Genbank	1945597
Sequence 10144	AC002038	Genbank	2226439
Sequence 10145	AC002039	Genbank	2342716
Sequence 10146	AC002051	Genbank	7798752
Sequence 10147	AC002064	Genbank	2076723
Sequence 10148	AC002347	Genbank	2828783
Sequence 10149	AC002350	Genbank	2961443
Sequence 10150	AC002357	Genbank	2815516
Sequence 10151	AC002400	Genbank	2576344
Sequence 10152	AC002470	Genbank	6478944
Sequence 10153	AC002528	Genbank	2388554
Sequence 10154	AC002531	Genbank	2580476
Sequence 10155	AC002544	Genbank	3337382
Sequence 10156	AC002553	Genbank	3126783
Sequence 10157	AC002984	Genbank	2443872
Sequence 10158	AC003004	Genbank	2522284
Sequence 10159	AC003007	Genbank	2911728
Sequence 10160	AC003012	Genbank	2547258
Sequence 10161	AC003025	Genbank	3337308
Sequence 10162	AC003047	Genbank	3169149
Sequence 10163	AC003103	Genbank	2842782
Sequence 10164	AC003111	Genbank	2636670
Sequence 10165	AC003663	Genbank	3097871

**Table 3-5**

Sequence 10166	AC003688	Genbank	3789719
Sequence 10167	AC003692	Genbank	2731601
Sequence 10168	AC003973	Genbank	2739352
Sequence 10169	AC004008	Genbank	2781388
Sequence 10170	AC004036	Genbank	2811104
Sequence 10171	AC004041	Genbank	2811099
Sequence 10172	AC004067	Genbank	3851208
Sequence 10173	AC004084	Genbank	2822156
Sequence 10174	AC004111	Genbank	2828786
Sequence 10175	AC004148	Genbank	3482960
Sequence 10176	AC004151	Genbank	2896795
Sequence 10177	AC004213	Genbank	3386628
Sequence 10178	AC004228	Genbank	4263838
Sequence 10179	AC004236	Genbank	2914668
Sequence 10180	AC004258	Genbank	2924759
Sequence 10181	AC004386	Genbank	3046272
Sequence 10182	AC004388	Genbank	3046271
Sequence 10183	AC004453	Genbank	2979600
Sequence 10184	AC004496	Genbank	2996645
Sequence 10185	AC004527	Genbank	4760422
Sequence 10186	AC004530	Genbank	3108050
Sequence 10187	AC004551	Genbank	3309005
Sequence 10188	AC004582	Genbank	3337307
Sequence 10189	AC004584	Genbank	3417305
Sequence 10190	AC004596	Genbank	4210521
Sequence 10191	AC004637	Genbank	3094998
Sequence 10192	AC004668	Genbank	3115345
Sequence 10193	AC004682	Genbank	3337388
Sequence 10194	AC004687	Genbank	3258613
Sequence 10195	AC004707	Genbank	3249127
Sequence 10196	AC004742	Genbank	3152630
Sequence 10197	AC004757	Genbank	3341707
Sequence 10198	AC004810	Genbank	3264567
Sequence 10199	AC004816	Genbank	4156209
Sequence 10200	AC004821	Genbank	4753291
Sequence 10201	AC004832	Genbank	6624129
Sequence 10202	AC004835	Genbank	4508154
Sequence 10203	AC004854	Genbank	4827328
Sequence 10204	AC004865	Genbank	4156195
Sequence 10205	AC004878	Genbank	3213119
Sequence 10206	AC004884	Genbank	4156189
Sequence 10207	AC004904	Genbank	4156180
Sequence 10208	AC004908	Genbank	4156179
Sequence 10209	AC004913	Genbank	3213084
Sequence 10210	AC004918	Genbank	4153871
Sequence 10211	AC004935	Genbank	4156170
Sequence 10212	AC004938	Genbank	3213059
Sequence 10213	AC004943	Genbank	3924671
Sequence 10214	AC004955	Genbank	4753267
Sequence 10215	AC004968	Genbank	4156160
Sequence 10216	AC004969	Genbank	4156159
Sequence 10217	AC004982	Genbank	3419846
Sequence 10218	AC004983	Genbank	4309885
Sequence 10219	AC004985	Genbank	5708490
Sequence 10220	AC004999	Genbank	3970963
Sequence 10221	AC005023	Genbank	3900847

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Sequence 10222	AC005035	Genbank	3953506
Sequence 10223	AC005041	Genbank	4508118
Sequence 10224	AC005057	Genbank	6587915
Sequence 10225	AC005058	Genbank	4156135
Sequence 10226	AC005069	Genbank	4753224
Sequence 10227	AC005070	Genbank	3406049
Sequence 10228	AC005071	Genbank	4508112
Sequence 10229	AC005095	Genbank	4753220
Sequence 10230	AC005101	Genbank	4508108
Sequence 10231	AC005154	Genbank	3242763
Sequence 10232	AC005180	Genbank	3687281
Sequence 10233	AC005189	Genbank	3264580
Sequence 10234	AC005193	Genbank	3309101
Sequence 10235	AC005203	Genbank	3273381
Sequence 10236	AC005212	Genbank	3287444
Sequence 10237	AC005218	Genbank	3282162
Sequence 10238	AC005258	Genbank	3289992
Sequence 10239	AC005263	Genbank	3289978
Sequence 10240	AC005300	Genbank	6492490
Sequence 10241	AC005316	Genbank	3738342
Sequence 10242	AC005318	Genbank	3885345
Sequence 10243	AC005325	Genbank	3366581
Sequence 10244	AC005343	Genbank	4165008
Sequence 10245	AC005346	Genbank	3366566
Sequence 10246	AC005368	Genbank	3367506
Sequence 10247	AC005378	Genbank	4508139
Sequence 10248	AC005412	Genbank	5931398
Sequence 10249	AC005480	Genbank	4835818
Sequence 10250	AC005488	Genbank	5836194
Sequence 10251	AC005520	Genbank	5001541
Sequence 10252	AC005531	Genbank	4153875
Sequence 10253	AC005550	Genbank	3478668
Sequence 10254	AC005606	Genbank	3540172
Sequence 10255	AC005612	Genbank	3540153
Sequence 10256	AC005618	Genbank	3548785
Sequence 10257	AC005630	Genbank	4159882
Sequence 10258	AC005661	Genbank	3818348
Sequence 10259	AC005740	Genbank	3687210
Sequence 10260	AC005754	Genbank	3688074
Sequence 10261	AC005786	Genbank	3702287
Sequence 10262	AC005789	Genbank	3702281
Sequence 10263	AC005799	Genbank	3789715
Sequence 10264	AC005828	Genbank	3789713
Sequence 10265	AC005876	Genbank	6249672
Sequence 10266	AC005971	Genbank	4314421
Sequence 10267	AC006001	Genbank	5708496
Sequence 10268	AC006008	Genbank	5091655
Sequence 10269	AC006017	Genbank	4508141
Sequence 10270	AC006040	Genbank	4314426
Sequence 10271	AC006055	Genbank	4071011
Sequence 10272	AC006057	Genbank	4731048
Sequence 10273	AC006059	Genbank	4544348
Sequence 10274	AC006064	Genbank	4572650
Sequence 10275	AC006116	Genbank	3962497
Sequence 10276	AC006160	Genbank	5701616
Sequence 10277	AC006254	Genbank	4726099



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Sequence 10278	AC006255	Genbank	5306223
Sequence 10279	AC006257	Genbank	4092478
Sequence 10280	AC006261	Genbank	4079613
Sequence 10281	AC006312	Genbank	4582483
Sequence 10282	AC006347	Genbank	4309919
Sequence 10283	AC006389	Genbank	4309883
Sequence 10284	AC006445	Genbank	6721147
Sequence 10285	AC006454	Genbank	5732182
Sequence 10286	AC006461	Genbank	4508128
Sequence 10287	AC006477	Genbank	7243871
Sequence 10288	AC006485	Genbank	4206211
Sequence 10289	AC006487	Genbank	4314418
Sequence 10290	AC006501	Genbank	4309874
Sequence 10291	AC006504	Genbank	4220442
Sequence 10292	AC006509	Genbank	5815507
Sequence 10293	AC006518	Genbank	4713939
Sequence 10294	AC006543	Genbank	4388738
Sequence 10295	AC006561	Genbank	4558534
Sequence 10296	AC006581	Genbank	4914350
Sequence 10297	AC006960	Genbank	4337211
Sequence 10298	AC007041	Genbank	5708471
Sequence 10299	AC007055	Genbank	4885691
Sequence 10300	AC007191	Genbank	4558643
Sequence 10301	AC007204	Genbank	4559317
Sequence 10302	AC007225	Genbank	6715703
Sequence 10303	AC007226	Genbank	6715702
Sequence 10304	AC007227	Genbank	6456148
Sequence 10305	AC007325	Genbank	7229741
Sequence 10306	AC007528	Genbank	5263309
Sequence 10307	AC007546	Genbank	5668756
Sequence 10308	AC007637	Genbank	8439781
Sequence 10309	AC007684	Genbank	5836173
Sequence 10310	AC007708	Genbank	5923689
Sequence 10311	AC007790	Genbank	5042474
Sequence 10312	AC007842	Genbank	5080755
Sequence 10313	AC007967	Genbank	5931455
Sequence 10314	AC008082	Genbank	6143846
Sequence 10315	AC008101	Genbank	6970743
Sequence 10316	AC008116	Genbank	6001959
Sequence 10317	AC008124	Genbank	5815491
Sequence 10318	AC008179	Genbank	5931440
Sequence 10319	AC008269	Genbank	7243890
Sequence 10320	AC008498	Genbank	6850299
Sequence 10321	AC008893	Genbank	7259691
Sequence 10322	AC009363	Genbank	6648145
Sequence 10323	AC009509	Genbank	6492473
Sequence 10324	AC009946	Genbank	6604542
Sequence 10325	AC011331	Genbank	9929686
Sequence 10326	AC011362	Genbank	6094545
Sequence 10327	AC015853	Genbank	6721261
Sequence 10328	AC020663	Genbank	6682593
Sequence 10329	AD000092	Genbank	1905905
Sequence 10330	AE000658	Genbank	2358019
Sequence 10331	AF000160	Genbank	2306783
Sequence 10332	AF001437	Genbank	2316039
Sequence 10333	AF001549	Genbank	3355302

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Sequence 10334	AF003001	Genbank	2529443
Sequence 10335	AF005888	Genbank	2738487
Sequence 10336	AF006043	Genbank	2674061
Sequence 10337	AF006088	Genbank	2282041
Sequence 10338	AF006501	Genbank	4836840
Sequence 10339	AF007140	Genbank	2852616
Sequence 10340	AF007544	Genbank	2970122
Sequence 10341	AF010238	Genbank	2282063
Sequence 10342	AF011390	Genbank	3298567
Sequence 10343	AF012072	Genbank	9967556
Sequence 10344	AF014807	Genbank	2338731
Sequence 10345	AF014955	Genbank	2772828
Sequence 10346	AF015812	Genbank	2599359
Sequence 10347	AF020351	Genbank	2655052
Sequence 10348	AF020352	Genbank	2655054
Sequence 10349	AF021819	Genbank	2460317
Sequence 10350	AF022211	Genbank	2465723
Sequence 10351	AF026126	Genbank	2828601
Sequence 10352	AF026292	Genbank	2559009
Sequence 10353	AF028832	Genbank	3287488
Sequence 10354	AF029786	Genbank	3403166
Sequence 10355	AF031416	Genbank	3213216
Sequence 10356	AF032387	Genbank	2641556
Sequence 10357	AF033095	Genbank	2645728
Sequence 10358	AF034759	Genbank	2653648
Sequence 10359	AF035286	Genbank	2661038
Sequence 10360	AF035295	Genbank	2661050
Sequence 10361	AF035313	Genbank	2661075
Sequence 10362	AF037222	Genbank	2921499
Sequence 10363	AF037447	Genbank	6466790
Sequence 10364	AF037448	Genbank	3037012
Sequence 10365	AF038196	Genbank	2795917
Sequence 10366	AF038200	Genbank	2795921
Sequence 10367	AF038554	Genbank	2895558
Sequence 10368	AF038954	Genbank	3329377
Sequence 10369	AF038955	Genbank	3329379
Sequence 10370	AF038958	Genbank	3329385
Sequence 10371	AF038966	Genbank	2791681
Sequence 10372	AF039029	Genbank	3834389
Sequence 10373	AF042836	Genbank	3776241
Sequence 10374	AF042857	Genbank	2952271
Sequence 10375	AF044956	Genbank	5326827
Sequence 10376	AF044957	Genbank	4164445
Sequence 10377	AF044959	Genbank	3348136
Sequence 10378	AF047181	Genbank	2909853
Sequence 10379	AF047431	Genbank	5514630
Sequence 10380	AF047436	Genbank	3335127
Sequence 10381	AF047439	Genbank	3335133
Sequence 10382	AF047440	Genbank	3335135
Sequence 10383	AF048686	Genbank	5737698
Sequence 10384	AF049140	Genbank	2947300
Sequence 10385	AF049613	Genbank	3329428
Sequence 10386	AF050637	Genbank	4164451
Sequence 10387	AF050638	Genbank	5326819
Sequence 10388	AF050639	Genbank	4164453
Sequence 10389	AF051894	Genbank	3095110

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Sequence 10390	AF052101	Genbank	3360408
Sequence 10391	AF052129	Genbank	3360438
Sequence 10392	AF052642	Genbank	2981453
Sequence 10393	AF053356	Genbank	3135305
Sequence 10394	AF053551	Genbank	3283048
Sequence 10395	AF053719	Genbank	6670884
Sequence 10396	AF054187	Genbank	4092059
Sequence 10397	AF054990	Genbank	3005703
Sequence 10398	AF054996	Genbank	3005711
Sequence 10399	AF055029	Genbank	3005759
Sequence 10400	AF055460	Genbank	3335143
Sequence 10401	AF055473	Genbank	nil
Sequence 10402	AF063020	Genbank	3283351
Sequence 10403	AF064019	Genbank	3347856
Sequence 10404	AF064607	Genbank	3152667
Sequence 10405	AF067518	Genbank	3850315
Sequence 10406	AF067656	Genbank	3901271
Sequence 10407	AF067844	Genbank	4240386
Sequence 10408	AF068846	Genbank	3201999
Sequence 10409	AF069378	Genbank	3982733
Sequence 10410	AF070598	Genbank	3387976
Sequence 10411	AF070635	Genbank	3283905
Sequence 10412	AF070644	Genbank	3283917
Sequence 10413	AF070649	Genbank	3283923
Sequence 10414	AF070655	Genbank	4454685
Sequence 10415	AF070659	Genbank	4454693
Sequence 10416	AF073298	Genbank	3641537
Sequence 10417	AF077030	Genbank	4689107
Sequence 10418	AF077036	Genbank	4689119
Sequence 10419	AF077037	Genbank	4689121
Sequence 10420	AF077043	Genbank	4689133
Sequence 10421	AF077202	Genbank	4679017
Sequence 10422	AF080092	Genbank	4322311
Sequence 10423	AF081484	Genbank	3420928
Sequence 10424	AF082513	Genbank	3649656
Sequence 10425	AF083441	Genbank	5813822
Sequence 10426	AF085357	Genbank	5114048
Sequence 10427	AF085359	Genbank	5114052
Sequence 10428	AF085867	Genbank	3483188
Sequence 10429	AF086090	Genbank	3483435
Sequence 10430	AF086207	Genbank	3483552
Sequence 10431	AF086210	Genbank	3483555
Sequence 10432	AF086234	Genbank	3483579
Sequence 10433	AF086378	Genbank	3483723
Sequence 10434	AF086388	Genbank	3483733
Sequence 10435	AF086557	Genbank	3483902
Sequence 10436	AF087481	Genbank	4322487
Sequence 10437	AF087659	Genbank	4191345
Sequence 10438	AF088028	Genbank	3523234
Sequence 10439	AF088036	Genbank	3523242
Sequence 10440	AF091071	Genbank	3859979
Sequence 10441	AF092094	Genbank	4426606
Sequence 10442	AF092130	Genbank	5138909
Sequence 10443	AF092135	Genbank	5138919
Sequence 10444	AF094481	Genbank	4140681
Sequence 10445	AF097026	Genbank	6409120

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Sequence 10446	AF097514	Genbank	4808600
Sequence 10447	AF098162	Genbank	3929582
Sequence 10448	AF100928	Genbank	4323586
Sequence 10449	AF105278	Genbank	4324471
Sequence 10450	AF106622	Genbank	4378528
Sequence 10451	AF109134	Genbank	4139227
Sequence 10452	AF109161	Genbank	4193945
Sequence 10453	AF110460	Genbank	4324698
Sequence 10454	AF111713	Genbank	5326796
Sequence 10455	AF112215	Genbank	6563217
Sequence 10456	AF112218	Genbank	6563223
Sequence 10457	AF112222	Genbank	6563229
Sequence 10458	AF113016	Genbank	6642755
Sequence 10459	AF113700	Genbank	6855634
Sequence 10460	AF117231	Genbank	6563235
Sequence 10461	AF117616	Genbank	4886909
Sequence 10462	AF118091	Genbank	6650827
Sequence 10463	AF121219	Genbank	4903275
Sequence 10464	AF121863	Genbank	4689265
Sequence 10465	AF122004	Genbank	5059061
Sequence 10466	AF125100	Genbank	5106995
Sequence 10467	AF125102	Genbank	5106999
Sequence 10468	AF126021	Genbank	6563273
Sequence 10469	AF126782	Genbank	6318547
Sequence 10470	AF126962	Genbank	6469610
Sequence 10471	AF128527	Genbank	4928043
Sequence 10472	AF129756	Genbank	4337095
Sequence 10473	AF129927	Genbank	4558506
Sequence 10474	AF131738	Genbank	4406548
Sequence 10475	AF131838	Genbank	4406677
Sequence 10476	AF131857	Genbank	4406704
Sequence 10477	AF132938	Genbank	4680646
Sequence 10478	AF132939	Genbank	4680648
Sequence 10479	AF132956	Genbank	4680682
Sequence 10480	AF132973	Genbank	4680716
Sequence 10481	AF132984	Genbank	4959567
Sequence 10482	AF134726	Genbank	4529886
Sequence 10483	AF144755	Genbank	5006628
Sequence 10484	AF146651	Genbank	5020073
Sequence 10485	AF147330	Genbank	4761681
Sequence 10486	AF151028	Genbank	7106777
Sequence 10487	AF151047	Genbank	7106815
Sequence 10488	AF151109	Genbank	6166337
Sequence 10489	AF151807	Genbank	4929566
Sequence 10490	AF151832	Genbank	4929616
Sequence 10491	AF151846	Genbank	4929644
Sequence 10492	AF151861	Genbank	4929674
Sequence 10493	AF151869	Genbank	4929690
Sequence 10494	AF151887	Genbank	4929726
Sequence 10495	AF151905	Genbank	4929762
Sequence 10496	AF152330	Genbank	5456956
Sequence 10497	AF153612	Genbank	4929830
Sequence 10498	AF156965	Genbank	5731112
Sequence 10499	AF161410	Genbank	6841233
Sequence 10500	AF161421	Genbank	6841255
Sequence 10501	AF161425	Genbank	6841263

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Sequence 10502	AF161428	Genbank	6841269
Sequence 10503	AF161448	Genbank	6841309
Sequence 10504	AF161485	Genbank	6841493
Sequence 10505	AF161490	Genbank	6841503
Sequence 10506	AF161503	Genbank	6841529
Sequence 10507	AF161556	Genbank	6841379
Sequence 10508	AF161800	Genbank	5353769
Sequence 10509	AF167570	Genbank	5762314
Sequence 10510	AF168956	Genbank	5702387
Sequence 10511	AF172368	Genbank	5679370
Sequence 10512	AF176796	Genbank	5759308
Sequence 10513	AF179274	Genbank	5911402
Sequence 10514	AF180473	Genbank	6856202
Sequence 10515	AF186249	Genbank	6572947
Sequence 10516	AF187554	Genbank	6653225
Sequence 10517	AF190465	Genbank	6120105
Sequence 10518	AF196779	Genbank	6180170
Sequence 10519	AF199339	Genbank	6708280
Sequence 10520	AF203815	Genbank	6979641
Sequence 10521	AF207664	Genbank	6685071
Sequence 10522	AF213884	Genbank	7012904
Sequence 10523	AF217403	Genbank	6691160
Sequence 10524	AJ000519	Genbank	2739214
Sequence 10525	AJ000881	Genbank	2924308
Sequence 10526	AJ001443	Genbank	6006514
Sequence 10527	AJ001866	Genbank	2969902
Sequence 10528	AJ001981	Genbank	2546978
Sequence 10529	AJ002030	Genbank	2570006
Sequence 10530	AJ006291	Genbank	3805937
Sequence 10531	AJ010069	Genbank	3483012
Sequence 10532	AJ010597	Genbank	3559873
Sequence 10533	AJ011497	Genbank	4128014
Sequence 10534	AJ011930	Genbank	3859769
Sequence 10535	AJ012409	Genbank	3881975
Sequence 10536	AJ133812	Genbank	4704217
Sequence 10537	AJ223352	Genbank	3255996
Sequence 10538	AJ224442	Genbank	2911586
Sequence 10539	AJ245719	Genbank	6688168
Sequence 10540	AK000023	Genbank	7019837
Sequence 10541	AK000028	Genbank	7019844
Sequence 10542	AK000086	Genbank	7019944
Sequence 10543	AK000107	Genbank	7019979
Sequence 10544	AK000221	Genbank	7020163
Sequence 10545	AK000291	Genbank	7020274
Sequence 10546	AK000318	Genbank	7020322
Sequence 10547	AK000348	Genbank	7020373
Sequence 10548	AK000395	Genbank	7020455
Sequence 10549	AK000414	Genbank	7020486
Sequence 10550	AK000426	Genbank	7020505
Sequence 10551	AK000434	Genbank	7020520
Sequence 10552	AK000439	Genbank	7020528
Sequence 10553	AK000474	Genbank	7020586
Sequence 10554	AK000486	Genbank	7020607
Sequence 10555	AK000507	Genbank	7020644
Sequence 10556	AK000541	Genbank	7020705
Sequence 10557	AK000548	Genbank	7020717

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Sequence 10558	AK000560	Genbank	7020738
Sequence 10559	AK000571	Genbank	7020756
Sequence 10560	AK000585	Genbank	7020779
Sequence 10561	AK000667	Genbank	7020906
Sequence 10562	AK000756	Genbank	7021041
Sequence 10563	AK000790	Genbank	7021092
Sequence 10564	AK000915	Genbank	7021878
Sequence 10565	AK000934	Genbank	7021909
Sequence 10566	AK001061	Genbank	7022095
Sequence 10567	AK001091	Genbank	7022140
Sequence 10568	AK001207	Genbank	7022315
Sequence 10569	AK001313	Genbank	7022490
Sequence 10570	AK001314	Genbank	7022491
Sequence 10571	AK001321	Genbank	7022503
Sequence 10572	AK001375	Genbank	7022596
Sequence 10573	AK001387	Genbank	7022615
Sequence 10574	AK001395	Genbank	7022625
Sequence 10575	AK001413	Genbank	7022655
Sequence 10576	AK001430	Genbank	7022682
Sequence 10577	AK001441	Genbank	7022699
Sequence 10578	AK001448	Genbank	7022713
Sequence 10579	AK001451	Genbank	7022717
Sequence 10580	AK001452	Genbank	7022718
Sequence 10581	AK001529	Genbank	7022840
Sequence 10582	AK001571	Genbank	7022906
Sequence 10583	AK001576	Genbank	7022913
Sequence 10584	AK001607	Genbank	7022965
Sequence 10585	AK001614	Genbank	7022977
Sequence 10586	AK001691	Genbank	7023106
Sequence 10587	AK001732	Genbank	7023176
Sequence 10588	AK001755	Genbank	7023219
Sequence 10589	AK001762	Genbank	7023231
Sequence 10590	AK002036	Genbank	7023674
Sequence 10591	AK002072	Genbank	7023732
Sequence 10592	AL008725	Genbank	2791551
Sequence 10593	AL009181	Genbank	2853179
Sequence 10594	AL021368	Genbank	3080468
Sequence 10595	AL021391	Genbank	4467344
Sequence 10596	AL021807	Genbank	9367202
Sequence 10597	AL021938	Genbank	3242170
Sequence 10598	AL022069	Genbank	3256174
Sequence 10599	AL022240	Genbank	4826471
Sequence 10600	AL022312	Genbank	4914501
Sequence 10601	AL022313	Genbank	4200326
Sequence 10602	AL022328	Genbank	5263010
Sequence 10603	AL022394	Genbank	9581758
Sequence 10604	AL023656	Genbank	5679746
Sequence 10605	AL024474	Genbank	3395511
Sequence 10606	AL024493	Genbank	3288439
Sequence 10607	AL030996	Genbank	3688349
Sequence 10608	AL031178	Genbank	3550040
Sequence 10609	AL031390	Genbank	5002609
Sequence 10610	AL031652	Genbank	9368398
Sequence 10611	AL031659	Genbank	9581755
Sequence 10612	AL031670	Genbank	4469083
Sequence 10613	AL031685	Genbank	9368423

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Sequence 10614	AL033397	Genbank	4902626
Sequence 10615	AL033518	Genbank	5763714
Sequence 10616	AL033531	Genbank	6807582
Sequence 10617	AL034371	Genbank	4938279
Sequence 10618	AL034374	Genbank	4455565
Sequence 10619	AL034379	Genbank	5918013
Sequence 10620	AL034400	Genbank	4455461
Sequence 10621	AL034548	Genbank	7263904
Sequence 10622	AL034582	Genbank	5830348
Sequence 10623	AL035209	Genbank	4160217
Sequence 10624	AL035304	Genbank	4200231
Sequence 10625	AL035413	Genbank	6010110
Sequence 10626	AL035422	Genbank	5263001
Sequence 10627	AL035458	Genbank	6624641
Sequence 10628	AL035541	Genbank	9581764
Sequence 10629	AL035661	Genbank	6015535
Sequence 10630	AL035699	Genbank	4826515
Sequence 10631	AL049280	Genbank	4500037
Sequence 10632	AL049442	Genbank	4500222
Sequence 10633	AL049563	Genbank	4902753
Sequence 10634	AL049610	Genbank	5679448
Sequence 10635	AL049712	Genbank	5629919
Sequence 10636	AL049779	Genbank	8176894
Sequence 10637	AL049823	Genbank	6273553
Sequence 10638	AL049829	Genbank	8217859
Sequence 10639	AL049830	Genbank	6729561
Sequence 10640	AL049835	Genbank	5708093
Sequence 10641	AL049843	Genbank	5830432
Sequence 10642	AL050161	Genbank	4884375
Sequence 10643	AL050265	Genbank	4886440
Sequence 10644	AL050275	Genbank	4886500
Sequence 10645	AL050331	Genbank	5668655
Sequence 10646	AL050343	Genbank	6137008
Sequence 10647	AL050363	Genbank	4914597
Sequence 10648	AL050383	Genbank	4914585
Sequence 10649	AL050392	Genbank	4914613
Sequence 10650	AL078621	Genbank	6013067
Sequence 10651	AL079295	Genbank	5102607
Sequence 10652	AL079312	Genbank	5102890
Sequence 10653	AL079342	Genbank	6018784
Sequence 10654	AL080080	Genbank	5262491
Sequence 10655	AL080084	Genbank	5262498
Sequence 10656	AL080085	Genbank	5262499
Sequence 10657	AL080088	Genbank	5262504
Sequence 10658	AL080089	Genbank	5262506
Sequence 10659	AL080139	Genbank	5262583
Sequence 10660	AL080178	Genbank	5262652
Sequence 10661	AL080243	Genbank	5870622
Sequence 10662	AL080276	Genbank	5763753
Sequence 10663	AL080317	Genbank	5830430
Sequence 10664	AL096701	Genbank	5912599
Sequence 10665	AL096764	Genbank	7228319
Sequence 10666	AL109613	Genbank	6136931
Sequence 10667	AL109754	Genbank	6911635
Sequence 10668	AL109758	Genbank	8217865
Sequence 10669	AL109925	Genbank	7105935

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Sequence 10670	AL110183	Genbank	5817095
Sequence 10671	AL110185	Genbank	5817098
Sequence 10672	AL110202	Genbank	5817121
Sequence 10673	AL117350	Genbank	7159817
Sequence 10674	AL117461	Genbank	5911922
Sequence 10675	AL117481	Genbank	5911958
Sequence 10676	AL117694	Genbank	8248721
Sequence 10677	AL121601	Genbank	7159760
Sequence 10678	AL121694	Genbank	6318179
Sequence 10679	AL121716	Genbank	7159797
Sequence 10680	AL122003	Genbank	6580480
Sequence 10681	AL132821	Genbank	7159786
Sequence 10682	AL132992	Genbank	6996086
Sequence 10683	AL133060	Genbank	6453483
Sequence 10684	AL133163	Genbank	6562367
Sequence 10685	AL133216	Genbank	6983473
Sequence 10686	AL133245	Genbank	7159621
Sequence 10687	AL133396	Genbank	6562003
Sequence 10688	AL133585	Genbank	6599171
Sequence 10689	AL135744	Genbank	6682291
Sequence 10690	AL135784	Genbank	6911343
Sequence 10691	AL135858	Genbank	7159622
Sequence 10692	AL136059	Genbank	7106618
Sequence 10693	AL136296	Genbank	8217913
Sequence 10694	AL136543	Genbank	6807646
Sequence 10695	AL136593	Genbank	7018431
Sequence 10696	AL136884	Genbank	6807672
Sequence 10697	AL137229	Genbank	7009597
Sequence 10698	AL137440	Genbank	6808001
Sequence 10699	AL137489	Genbank	6808110
Sequence 10700	AL137496	Genbank	6808137
Sequence 10701	AL137519	Genbank	6808181
Sequence 10702	AL137543	Genbank	6808222
Sequence 10703	AL137686	Genbank	6807956
Sequence 10704	AL137692	Genbank	6808008
Sequence 10705	AL137751	Genbank	6808387
Sequence 10706	AL137818	Genbank	7009598
Sequence 10707	AP000046	Genbank	3132356
Sequence 10708	AP000085	Genbank	4730826
Sequence 10709	AP000217	Genbank	4827264
Sequence 10710	AP000345	Genbank	5103008
Sequence 10711	AP000350	Genbank	5103013
Sequence 10712	AP000352	Genbank	6016843
Sequence 10713	AP000500	Genbank	5926687
Sequence 10714	AP000525	Genbank	5931503
Sequence 10715	AP000700	Genbank	6705908
Sequence 10716	AP000962	Genbank	6942330
Sequence 10717	AP001052	Genbank	6693602
Sequence 10718	AP001136	Genbank	6970360
Sequence 10719	AP001137	Genbank	6970361
Sequence 10720	AP001138	Genbank	7262569
Sequence 10721	AP001172	Genbank	6983884
Sequence 10722	AP001252	Genbank	7077183
Sequence 10723	AP001343	Genbank	7209831
Sequence 10724	AP001346	Genbank	7209834
Sequence 10725	D13866	Genbank	433410



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Sequence 10726	D13900	Genbank	433412
Sequence 10727	D14043	Genbank	219924
Sequence 10728	D14658	Genbank	285940
Sequence 10729	D14662	Genbank	285948
Sequence 10730	D14665	Genbank	6630617
Sequence 10731	D14696	Genbank	285962
Sequence 10732	D14710	Genbank	559324
Sequence 10733	D15057	Genbank	493244
Sequence 10734	D16111	Genbank	435637
Sequence 10735	D16234	Genbank	303617
Sequence 10736	D16481	Genbank	473711
Sequence 10737	D16938	Genbank	598868
Sequence 10738	D16947	Genbank	598932
Sequence 10739	D21089	Genbank	475156
Sequence 10740	D25218	Genbank	434778
Sequence 10741	D26600	Genbank	565650
Sequence 10742	D29805	Genbank	474986
Sequence 10743	D38112	Genbank	644480
Sequence 10744	D42041	Genbank	577294
Sequence 10745	D42052	Genbank	1136740
Sequence 10746	D42063	Genbank	924266
Sequence 10747	D45915	Genbank	1483130
Sequence 10748	D49355	Genbank	1020405
Sequence 10749	D50372	Genbank	2605593
Sequence 10750	D50929	Genbank	1469200
Sequence 10751	D63486	Genbank	1469885
Sequence 10752	D63874	Genbank	968887
Sequence 10753	D66904	Genbank	1235726
Sequence 10754	D67025	Genbank	2656091
Sequence 10755	D79986	Genbank	1136389
Sequence 10756	D80000	Genbank	1136415
Sequence 10757	D80007	Genbank	1136429
Sequence 10758	D83253	Genbank	2951772
Sequence 10759	D84907	Genbank	1596053
Sequence 10760	D85181	Genbank	1906795
Sequence 10761	D86962	Genbank	1503997
Sequence 10762	D87018	Genbank	2114280
Sequence 10763	D87127	Genbank	1817551
Sequence 10764	D87666	Genbank	1620016
Sequence 10765	D87742	Genbank	1665824
Sequence 10766	D89052	Genbank	1694672
Sequence 10767	E01716	Genbank	2169969
Sequence 10768	E01932	Genbank	2170180
Sequence 10769	E01954	Genbank	2170202
Sequence 10770	E02628	Genbank	2170856
Sequence 10771	E13330	Genbank	3252135
Sequence 10772	J01415	Genbank	1944628
Sequence 10773	J03077	Genbank	183230
Sequence 10774	J03473	Genbank	337423
Sequence 10775	J03746	Genbank	183655
Sequence 10776	J04799	Genbank	190197
Sequence 10777	J04823	Genbank	1311703
Sequence 10778	J05016	Genbank	181507
Sequence 10779	J05480	Genbank	179807
Sequence 10780	L01057	Genbank	292462
Sequence 10781	L04483	Genbank	292444

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Sequence 10782	L05092	Genbank	388031
Sequence 10783	L05628	Genbank	1835658
Sequence 10784	L08125	Genbank	306500
Sequence 10785	L09159	Genbank	307374
Sequence 10786	L11370	Genbank	387674
Sequence 10787	L12136	Genbank	181536
Sequence 10788	L12168	Genbank	178083
Sequence 10789	L19185	Genbank	440307
Sequence 10790	L20941	Genbank	507251
Sequence 10791	L28809	Genbank	454151
Sequence 10792	L29252	Genbank	808011
Sequence 10793	L31610	Genbank	1220360
Sequence 10794	L34160	Genbank	642091
Sequence 10795	L35681	Genbank	532031
Sequence 10796	L38933	Genbank	1008841
Sequence 10797	L38951	Genbank	893287
Sequence 10798	L38995	Genbank	704415
Sequence 10799	L39068	Genbank	994714
Sequence 10800	L39945	Genbank	703081
Sequence 10801	L40407	Genbank	703117
Sequence 10802	L41887	Genbank	950423
Sequence 10803	L47647	Genbank	1000861
Sequence 10804	L48984	Genbank	1066728
Sequence 10805	L78754	Genbank	1374832
Sequence 10806	M11147	Genbank	182513
Sequence 10807	M15887	Genbank	181960
Sequence 10808	M16342	Genbank	184266
Sequence 10809	M17886	Genbank	190233
Sequence 10810	M18930	Genbank	184371
Sequence 10811	M19989	Genbank	189719
Sequence 10812	M19997	Genbank	181968
Sequence 10813	M20496	Genbank	809235
Sequence 10814	M21142	Genbank	183402
Sequence 10815	M21154	Genbank	178517
Sequence 10816	M21575	Genbank	1311702
Sequence 10817	M24543	Genbank	341200
Sequence 10818	M24902	Genbank	189618
Sequence 10819	M25639	Genbank	188555
Sequence 10820	M26481	Genbank	619789
Sequence 10821	M26663	Genbank	618463
Sequence 10822	M27024	Genbank	341598
Sequence 10823	M29064	Genbank	337452
Sequence 10824	M29366	Genbank	181979
Sequence 10825	M29877	Genbank	178408
Sequence 10826	M31520	Genbank	337504
Sequence 10827	M33146	Genbank	181070
Sequence 10828	M33616	Genbank	184381
Sequence 10829	M34600	Genbank	180934
Sequence 10830	M36341	Genbank	178984
Sequence 10831	M37583	Genbank	184059
Sequence 10832	M58459	Genbank	337511
Sequence 10833	M58485	Genbank	180154
Sequence 10834	M60457	Genbank	181249
Sequence 10835	M60756	Genbank	184085
Sequence 10836	M64929	Genbank	190421
Sequence 10837	M69181	Genbank	641957

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Sequence 10838	M74775	Genbank	187151
Sequence 10839	M76299	Genbank	188778
Sequence 10840	M81182	Genbank	190128
Sequence 10841	M81601	Genbank	339442
Sequence 10842	M83088	Genbank	189925
Sequence 10843	M93036	Genbank	182904
Sequence 10844	M95775	Genbank	187180
Sequence 10845	M96256	Genbank	182625
Sequence 10846	M96982	Genbank	338262
Sequence 10847	S48220	Genbank	257451
Sequence 10848	S67861	Genbank	239579
Sequence 10849	S70290	Genbank	546602
Sequence 10850	S72481	Genbank	632789
Sequence 10851	S75463	Genbank	833998
Sequence 10852	U00968	Genbank	409404
Sequence 10853	U01925	Genbank	460086
Sequence 10854	U09582	Genbank	493079
Sequence 10855	U09646	Genbank	1041191
Sequence 10856	U09813	Genbank	1008454
Sequence 10857	U12404	Genbank	531170
Sequence 10858	U12465	Genbank	562073
Sequence 10859	U14650	Genbank	541612
Sequence 10860	U14970	Genbank	550020
Sequence 10861	U15008	Genbank	600747
Sequence 10862	U16797	Genbank	902370
Sequence 10863	U17899	Genbank	717053
Sequence 10864	U19144	Genbank	914902
Sequence 10865	U21090	Genbank	1008457
Sequence 10866	U23803	Genbank	773643
Sequence 10867	U25182	Genbank	799380
Sequence 10868	U28369	Genbank	974283
Sequence 10869	U30826	Genbank	1049079
Sequence 10870	U32944	Genbank	1209060
Sequence 10871	U36336	Genbank	1209628
Sequence 10872	U38178	Genbank	1145301
Sequence 10873	U44754	Genbank	1174202
Sequence 10874	U47742	Genbank	1517913
Sequence 10875	U49245	Genbank	1216503
Sequence 10876	U49973	Genbank	2226003
Sequence 10877	U50939	Genbank	1314559
Sequence 10878	U52111	Genbank	8331754
Sequence 10879	U54993	Genbank	4097314
Sequence 10880	U55937	Genbank	1575044
Sequence 10881	U57847	Genbank	1373420
Sequence 10882	U58522	Genbank	1381163
Sequence 10883	U60644	Genbank	1575346
Sequence 10884	U60808	Genbank	1915971
Sequence 10885	U62961	Genbank	1519051
Sequence 10886	U65896	Genbank	1763689
Sequence 10887	U66871	Genbank	1519518
Sequence 10888	U68105	Genbank	1562509
Sequence 10889	U73824	Genbank	1857236
Sequence 10890	U77643	Genbank	2062390
Sequence 10891	U79273	Genbank	1710239
Sequence 10892	U79274	Genbank	1710240
Sequence 10893	U80017	Genbank	1737211

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Sequence 10894	U83463	Genbank	1916849
Sequence 10895	U87460	Genbank	2076881
Sequence 10896	U90441	Genbank	2439984
Sequence 10897	U90915	Genbank	1913895
Sequence 10898	U91323	Genbank	3582311
Sequence 10899	U91328	Genbank	2088550
Sequence 10900	U97670	Genbank	3264860
Sequence 10901	V00478	Genbank	28244
Sequence 10902	X00351	Genbank	28251
Sequence 10903	X03083	Genbank	34309
Sequence 10904	X04588	Genbank	37423
Sequence 10905	X05332	Genbank	35740
Sequence 10906	X13238	Genbank	1200056
Sequence 10907	X15187	Genbank	37260
Sequence 10908	X15341	Genbank	1197215
Sequence 10909	X15822	Genbank	30146
Sequence 10910	X51525	Genbank	30170
Sequence 10911	X53280	Genbank	29504
Sequence 10912	X53586	Genbank	33943
Sequence 10913	X56932	Genbank	23690
Sequence 10914	X58288	Genbank	32455
Sequence 10915	X60221	Genbank	509290
Sequence 10916	X63432	Genbank	28335
Sequence 10917	X63657	Genbank	296185
Sequence 10918	X64707	Genbank	29382
Sequence 10919	X65923	Genbank	31302
Sequence 10920	X67247	Genbank	36149
Sequence 10921	X67951	Genbank	287640
Sequence 10922	X74801	Genbank	671526
Sequence 10923	X74968	Genbank	439659
Sequence 10924	X75821	Genbank	509780
Sequence 10925	X75861	Genbank	456258
Sequence 10926	X78136	Genbank	460772
Sequence 10927	X78137	Genbank	460770
Sequence 10928	X78669	Genbank	469884
Sequence 10929	X80199	Genbank	2385366
Sequence 10930	X81109	Genbank	535057
Sequence 10931	X84694	Genbank	872117
Sequence 10932	X84908	Genbank	1502344
Sequence 10933	X86779	Genbank	1006658
Sequence 10934	X87176	Genbank	1050516
Sequence 10935	X87949	Genbank	1143491
Sequence 10936	X91790	Genbank	2511667
Sequence 10937	X97544	Genbank	1770563
Sequence 10938	X98356	Genbank	1648869
Sequence 10939	X99585	Genbank	1770518
Sequence 10940	Y00052	Genbank	30308
Sequence 10941	Y00282	Genbank	36048
Sequence 10942	Y00345	Genbank	35569
Sequence 10943	Y00815	Genbank	34266
Sequence 10944	Y13620	Genbank	2181877
Sequence 10945	Y15286	Genbank	2584788
Sequence 10946	Z11692	Genbank	31107
Sequence 10947	Z14000	Genbank	296063
Sequence 10948	Z24724	Genbank	505034
Sequence 10949	Z36832	Genbank	533946

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Sequence 10950	Z37986	Genbank	780262
Sequence 10951	Z37994	Genbank	556810
Sequence 10952	Z49250	Genbank	807889
Sequence 10953	Z63138	Genbank	1035516
Sequence 10954	Z64102	Genbank	1036480
Sequence 10955	Z68284	Genbank	1130698
Sequence 10956	Z70702	Genbank	1332492
Sequence 10957	Z82194	Genbank	2582744
Sequence 10958	Z83745	Genbank	1754650
Sequence 10959	Z83844	Genbank	4467204
Sequence 10960	Z83856	Genbank	2995261
Sequence 10961	Z84722	Genbank	1817579
Sequence 10962	Z85999	Genbank	2326514
Sequence 10963	Z92544	Genbank	1869775
Sequence 10964	Z93016	Genbank	9650703
Sequence 10965	Z93242	Genbank	3164071
Sequence 10966	Z95114	Genbank	5101742
Sequence 10967	Z95704	Genbank	2121307
Sequence 10968	Z97053	Genbank	9650676
Sequence 10969	Z97056	Genbank	2832593
Sequence 10970	Z97183	Genbank	2961406
Sequence 10971	Z97630	Genbank	4582128
Sequence 10972	Z98749	Genbank	4775611
Sequence 10973	Z98882	Genbank	4490865
Sequence 10974	Z98884	Genbank	5304861
Sequence 10975	AA001709	EST	1445523
Sequence 10976	AA004303	EST	1447948
Sequence 10977	AA007269	EST	1463303
Sequence 10978	AA010173	EST	1471349
Sequence 10979	AA010233	EST	1471260
Sequence 10980	AA010519	EST	1471545
Sequence 10981	AA011539	EST	1472565
Sequence 10982	AA015585	EST	1476651
Sequence 10983	AA017170	EST	1479335
Sequence 10984	AA018892	EST	1482283
Sequence 10985	AA021623	EST	1485284
Sequence 10986	AA025361	EST	1489375
Sequence 10987	AA026455	EST	1492355
Sequence 10988	AA026758	EST	1492556
Sequence 10989	AA027906	EST	1493993
Sequence 10990	AA031317	EST	1501272
Sequence 10991	AA035377	EST	1507101
Sequence 10992	AA037143	EST	1512251
Sequence 10993	AA039734	EST	1516236
Sequence 10994	AA039957	EST	1516261
Sequence 10995	AA040714	EST	1516992
Sequence 10996	AA044237	EST	1522113
Sequence 10997	AA044575	EST	1522808
Sequence 10998	AA044703	EST	1522971
Sequence 10999	AA045239	EST	1523443
Sequence 11000	AA045616	EST	1525379
Sequence 11001	AA047046	EST	1524944
Sequence 11002	AA054272	EST	1545197
Sequence 11003	AA057541	EST	1550246
Sequence 11004	AA058950	EST	1551758
Sequence 11005	AA062994	EST	1557655

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Sequence 11006	AA063190	EST	1556924
Sequence 11007	AA063198	EST	1556796
Sequence 11008	AA070463	EST	1577823
Sequence 11009	AA070785	EST	1578347
Sequence 11010	AA074614	EST	1614492
Sequence 11011	AA075478	EST	1615543
Sequence 11012	AA076016	EST	1615903
Sequence 11013	AA083482	EST	1625543
Sequence 11014	AA085007	EST	1627125
Sequence 11015	AA085810	EST	1629342
Sequence 11016	AA088344	EST	1633856
Sequence 11017	AA089630	EST	1636122
Sequence 11018	AA093542	EST	1639127
Sequence 11019	AA095108	EST	1640693
Sequence 11020	AA098799	EST	1648802
Sequence 11021	AA099464	EST	1645408
Sequence 11022	AA099750	EST	1645861
Sequence 11023	AA100034	EST	1647326
Sequence 11024	AA101634	EST	1648570
Sequence 11025	AA101663	EST	1648744
Sequence 11026	AA102383	EST	1647229
Sequence 11027	AA102507	EST	1647621
Sequence 11028	AA113782	EST	1667703
Sequence 11029	AA114830	EST	1669952
Sequence 11030	AA115175	EST	1670372
Sequence 11031	AA115455	EST	1670257
Sequence 11032	AA115636	EST	1670771
Sequence 11033	AA115738	EST	1670751
Sequence 11034	AA122059	EST	1678078
Sequence 11035	AA122097	EST	1678318
Sequence 11036	AA126927	EST	1687948
Sequence 11037	AA131505	EST	1692993
Sequence 11038	AA131583	EST	1693072
Sequence 11039	AA133311	EST	1690351
Sequence 11040	AA135694	EST	1696705
Sequence 11041	AA136084	EST	1697294
Sequence 11042	AA136337	EST	1697545
Sequence 11043	AA137210	EST	1697007
Sequence 11044	AA143393	EST	1712764
Sequence 11045	AA146684	EST	1716058
Sequence 11046	AA149579	EST	1720380
Sequence 11047	AA150361	EST	1721873
Sequence 11048	AA151438	EST	1719775
Sequence 11049	AA151565	EST	1720183
Sequence 11050	AA151816	EST	1720511
Sequence 11051	AA152016	EST	1720854
Sequence 11052	AA156951	EST	1728584
Sequence 11053	AA157731	EST	1729356
Sequence 11054	AA160577	EST	1735945
Sequence 11055	AA161189	EST	1735443
Sequence 11056	AA161337	EST	1735652
Sequence 11057	AA165446	EST	1741462
Sequence 11058	AA169597	EST	1747985
Sequence 11059	AA169657	EST	1748026
Sequence 11060	AA172193	EST	1751270
Sequence 11061	AA173705	EST	1753883

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Sequence 11062	AA174161	EST	1754441
Sequence 11063	AA176485	EST	1757618
Sequence 11064	AA177128	EST	1758286
Sequence 11065	AA178986	EST	1760538
Sequence 11066	AA180264	EST	1761531
Sequence 11067	AA186328	EST	1774446
Sequence 11068	AA187076	EST	1775245
Sequence 11069	AA188297	EST	1775383
Sequence 11070	AA190560	EST	1779535
Sequence 11071	AA193327	EST	1782738
Sequence 11072	AA193455	EST	1782846
Sequence 11073	AA203319	EST	1799028
Sequence 11074	AA206446	EST	1801826
Sequence 11075	AA207077	EST	1802642
Sequence 11076	AA209329	EST	1807273
Sequence 11077	AA211900	EST	1810537
Sequence 11078	AA223613	EST	1844155
Sequence 11079	AA225958	EST	1847285
Sequence 11080	AA226672	EST	1847988
Sequence 11081	AA232991	EST	1856115
Sequence 11082	AA233294	EST	1856287
Sequence 11083	AA234637	EST	1859306
Sequence 11084	AA235298	EST	1859735
Sequence 11085	AA243646	EST	1874456
Sequence 11086	AA248470	EST	1879307
Sequence 11087	AA248684	EST	1879900
Sequence 11088	AA250936	EST	1886035
Sequence 11089	AA251061	EST	1886024
Sequence 11090	AA251263	EST	1886226
Sequence 11091	AA251692	EST	1886655
Sequence 11092	AA252143	EST	1887106
Sequence 11093	AA252608	EST	1887582
Sequence 11094	AA252943	EST	1882696
Sequence 11095	AA255735	EST	1892673
Sequence 11096	AA257016	EST	1891145
Sequence 11097	AA258732	EST	1893893
Sequence 11098	AA262091	EST	1898235
Sequence 11099	AA262425	EST	1897921
Sequence 11100	AA262683	EST	1898095
Sequence 11101	AA278796	EST	1920117
Sequence 11102	AA282285	EST	1925201
Sequence 11103	AA285126	EST	1928107
Sequence 11104	AA286765	EST	1933628
Sequence 11105	AA293822	EST	1941745
Sequence 11106	AA296237	EST	1948581
Sequence 11107	AA296690	EST	1949182
Sequence 11108	AA296812	EST	1949146
Sequence 11109	AA296923	EST	1949255
Sequence 11110	AA304244	EST	1956597
Sequence 11111	AA305213	EST	1957540
Sequence 11112	AA305921	EST	1958412
Sequence 11113	AA306323	EST	1958671
Sequence 11114	AA306941	EST	1959271
Sequence 11115	AA307728	EST	1960056
Sequence 11116	AA308688	EST	1961018
Sequence 11117	AA309119	EST	1961444

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Sequence 11118	AA309929	EST	1962484
Sequence 11119	AA310375	EST	1962704
Sequence 11120	AA311577	EST	1963980
Sequence 11121	AA313294	EST	1965623
Sequence 11122	AA314382	EST	1966731
Sequence 11123	AA314635	EST	1967114
Sequence 11124	AA315157	EST	1967486
Sequence 11125	AA315989	EST	1968318
Sequence 11126	AA316456	EST	1968785
Sequence 11127	AA316676	EST	1969004
Sequence 11128	AA325081	EST	1977579
Sequence 11129	AA325713	EST	1977956
Sequence 11130	AA329695	EST	1981937
Sequence 11131	AA331249	EST	1983730
Sequence 11132	AA340295	EST	1992760
Sequence 11133	AA340744	EST	1992983
Sequence 11134	AA343834	EST	1996133
Sequence 11135	AA345527	EST	1997837
Sequence 11136	AA355326	EST	2007708
Sequence 11137	AA364646	EST	2016963
Sequence 11138	AA365552	EST	2017902
Sequence 11139	AA371377	EST	2023695
Sequence 11140	AA379942	EST	2032282
Sequence 11141	AA382161	EST	2034479
Sequence 11142	AA384806	EST	2037123
Sequence 11143	AA393525	EST	2046493
Sequence 11144	AA400534	EST	2054467
Sequence 11145	AA400644	EST	2054515
Sequence 11146	AA402038	EST	2056038
Sequence 11147	AA402743	EST	2057061
Sequence 11148	AA402800	EST	2056553
Sequence 11149	AA404235	EST	2058977
Sequence 11150	AA404535	EST	2059268
Sequence 11151	AA406310	EST	2064294
Sequence 11152	AA410936	EST	2070190
Sequence 11153	AA411736	EST	2069397
Sequence 11154	AA417324	EST	2077423
Sequence 11155	AA417743	EST	2079544
Sequence 11156	AA418847	EST	2080666
Sequence 11157	AA420643	EST	2094559
Sequence 11158	AA420650	EST	2094538
Sequence 11159	AA424006	EST	2102976
Sequence 11160	AA424349	EST	2103336
Sequence 11161	AA425535	EST	2106293
Sequence 11162	AA426021	EST	2106545
Sequence 11163	AA427560	EST	2111428
Sequence 11164	AA428565	EST	2112562
Sequence 11165	AA430605	EST	2111178
Sequence 11166	AA432282	EST	2114670
Sequence 11167	AA436100	EST	2141014
Sequence 11168	AA437224	EST	2142138
Sequence 11169	AA442070	EST	2153948
Sequence 11170	AA443297	EST	2155972
Sequence 11171	AA443762	EST	2156437
Sequence 11172	AA446702	EST	2159367
Sequence 11173	AA446759	EST	2159424



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Sequence 11174	AA446859	EST	2159524
Sequence 11175	AA446942	EST	2159607
Sequence 11176	AA447406	EST	2161076
Sequence 11177	AA447871	EST	2161541
Sequence 11178	AA448125	EST	2161795
Sequence 11179	AA448292	EST	2161962
Sequence 11180	AA449087	EST	2163107
Sequence 11181	AA450129	EST	2163879
Sequence 11182	AA451779	EST	2165448
Sequence 11183	AA452120	EST	2165789
Sequence 11184	AA454989	EST	2177765
Sequence 11185	AA455869	EST	2178645
Sequence 11186	AA456454	EST	2179030
Sequence 11187	AA460766	EST	2185886
Sequence 11188	AA464281	EST	2189165
Sequence 11189	AA464409	EST	2189293,
Sequence 11190	AA464803	EST	2189687
Sequence 11191	AA468360	EST	2194894
Sequence 11192	AA476267	EST	2204478
Sequence 11193	AA478669	EST	2207303
Sequence 11194	AA483131	EST	2211380
Sequence 11195	AA483251	EST	2212064
Sequence 11196	AA483450	EST	2212263
Sequence 11197	AA484155	EST	2212968
Sequence 11198	AA484907	EST	2213974
Sequence 11199	AA485065	EST	2214284
Sequence 11200	AA485608	EST	2214827
Sequence 11201	AA487694	EST	2217858
Sequence 11202	AA489068	EST	2218670
Sequence 11203	AA489782	EST	2220666
Sequence 11204	AA491858	EST	2221420
Sequence 11205	AA492143	EST	2221705
Sequence 11206	AA492423	EST	2221985
Sequence 11207	AA493522	EST	2223363
Sequence 11208	AA493635	EST	2223476
Sequence 11209	AA502361	EST	2237328
Sequence 11210	AA502517	EST	2237484
Sequence 11211	AA503033	EST	2238000
Sequence 11212	AA503078	EST	2238045
Sequence 11213	AA504572	EST	2240732
Sequence 11214	AA504890	EST	2241050
Sequence 11215	AA508394	EST	2245897
Sequence 11216	AA508597	EST	2246100
Sequence 11217	AA513123	EST	2251535
Sequence 11218	AA516472	EST	2255996
Sequence 11219	AA523172	EST	2263884
Sequence 11220	AA524187	EST	2265115
Sequence 11221	AA525960	EST	2268029
Sequence 11222	AA526740	EST	2268809
Sequence 11223	AA527181	EST	2269250
Sequence 11224	AA527494	EST	2269563
Sequence 11225	AA527667	EST	2269736
Sequence 11226	AA528148	EST	2270217
Sequence 11227	AA531585	EST	2274291
Sequence 11228	AA532665	EST	2276919
Sequence 11229	AA532805	EST	2278381

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Sequence 11230	AA533279	EST	2277375
Sequence 11231	AA535098	EST	2279351
Sequence 11232	AA541537	EST	2287971
Sequence 11233	AA551141	EST	2321393
Sequence 11234	AA551385	EST	2321637
Sequence 11235	AA551709	EST	2321961
Sequence 11236	AA551770	EST	2322022
Sequence 11237	AA557174	EST	2327651
Sequence 11238	AA557191	EST	2327668
Sequence 11239	AA557633	EST	2328110
Sequence 11240	AA559906	EST	2331397
Sequence 11241	AA563778	EST	2335417
Sequence 11242	AA564118	EST	2335757
Sequence 11243	AA565432	EST	2337071
Sequence 11244	AA569846	EST	2343826
Sequence 11245	AA573721	EST	2348236
Sequence 11246	AA579486	EST	2357670
Sequence 11247	AA580489	EST	2355816
Sequence 11248	AA582006	EST	2360684
Sequence 11249	AA582252	EST	2359612
Sequence 11250	AA582370	EST	2359730
Sequence 11251	AA583922	EST	2368531
Sequence 11252	AA588541	EST	2401716
Sequence 11253	AA593402	EST	2409164
Sequence 11254	AA595339	EST	2410689
Sequence 11255	AA598710	EST	2432382
Sequence 11256	AA599736	EST	2433361
Sequence 11257	AA600194	EST	2433819
Sequence 11258	AA602630	EST	2436564
Sequence 11259	AA604339	EST	2445248
Sequence 11260	AA608990	EST	2457418
Sequence 11261	AA609462	EST	2457890
Sequence 11262	AA609868	EST	2458296
Sequence 11263	AA610424	EST	2458852
Sequence 11264	AA612631	EST	2464828
Sequence 11265	AA613033	EST	2464071
Sequence 11266	AA613044	EST	2464082
Sequence 11267	AA614081	EST	2466215
Sequence 11268	AA618243	EST	2505448
Sequence 11269	AA626635	EST	2539022
Sequence 11270	AA626642	EST	2539029
Sequence 11271	AA626833	EST	2539220
Sequence 11272	AA627181	EST	2540225
Sequence 11273	AA628451	EST	2540838
Sequence 11274	AA628721	EST	2541108
Sequence 11275	AA630616	EST	2553227
Sequence 11276	AA630981	EST	2553592
Sequence 11277	AA631024	EST	2553635
Sequence 11278	AA631684	EST	2554295
Sequence 11279	AA632534	EST	2555948
Sequence 11280	AA633794	EST	2557008
Sequence 11281	AA634087	EST	2557301
Sequence 11282	AA634120	EST	2557334
Sequence 11283	AA640721	EST	2565971
Sequence 11284	AA652476	EST	2584128
Sequence 11285	AA652829	EST	2584481

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Sequence 11286	AA653775	EST	2589929
Sequence 11287	AA654914	EST	2591068
Sequence 11288	AA658095	EST	2594249
Sequence 11289	AA659440	EST	2595594
Sequence 11290	AA662466	EST	2616557
Sequence 11291	AA662530	EST	2616621
Sequence 11292	AA663778	EST	2617769
Sequence 11293	AA666385	EST	2620998
Sequence 11294	AA669098	EST	2630597
Sequence 11295	AA677560	EST	2658082
Sequence 11296	AA678246	EST	2658768
Sequence 11297	AA679533	EST	2660055
Sequence 11298	AA701882	EST	2704995
Sequence 11299	AA702803	EST	2705916
Sequence 11300	AA702824	EST	2705937
Sequence 11301	AA705800	EST	2715718
Sequence 11302	AA707319	EST	2717237
Sequence 11303	AA707321	EST	2717239
Sequence 11304	AA723194	EST	2740971
Sequence 11305	AA724307	EST	2742014
Sequence 11306	AA732439	EST	2753046
Sequence 11307	AA741013	EST	2779605
Sequence 11308	AA741421	EST	2780013
Sequence 11309	AA744747	EST	2783511
Sequence 11310	AA748046	EST	2788004
Sequence 11311	AA748621	EST	2788579
Sequence 11312	AA761266	EST	2810196
Sequence 11313	AA761352	EST	2810282
Sequence 11314	AA768205	EST	2819220
Sequence 11315	AA768918	EST	2820156
Sequence 11316	AA773040	EST	2824611
Sequence 11317	AA775624	EST	2834958
Sequence 11318	AA775681	EST	2835015
Sequence 11319	AA777245	EST	2836576
Sequence 11320	AA777969	EST	2837370
Sequence 11321	AA778560	EST	2837891
Sequence 11322	AA779371	EST	2838702
Sequence 11323	AA782583	EST	2841914
Sequence 11324	AA788913	EST	2849033
Sequence 11325	AA804448	EST	2875961
Sequence 11326	AA805260	EST	2874010
Sequence 11327	AA805691	EST	2874441
Sequence 11328	AA809388	EST	2878794
Sequence 11329	AA809587	EST	2878993
Sequence 11330	AA810838	EST	2880449
Sequence 11331	AA812263	EST	2881874
Sequence 11332	AA813882	EST	2883478
Sequence 11333	AA814716	EST	2884312
Sequence 11334	AA827816	EST	2900179
Sequence 11335	AA829667	EST	2902766
Sequence 11336	AA831192	EST	2904291
Sequence 11337	AA834216	EST	2907815
Sequence 11338	AA837128	EST	2912327
Sequence 11339	AA838535	EST	2913334
Sequence 11340	AA845554	EST	2933313
Sequence 11341	AA846156	EST	2932296

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Sequence 11342	AA846339	EST	2932479
Sequence 11343	AA846735	EST	2932875
Sequence 11344	AA846815	EST	2932955
Sequence 11345	AA847840	EST	2934358
Sequence 11346	AA852960	EST	2939699
Sequence 11347	AA856586	EST	2944888
Sequence 11348	AA864573	EST	2958886
Sequence 11349	AA865331	EST	2957607
Sequence 11350	AA865871	EST	2958147
Sequence 11351	AA868273	EST	2963718
Sequence 11352	AA868720	EST	2964165
Sequence 11353	AA868840	EST	2964285
Sequence 11354	AA872275	EST	2968453
Sequence 11355	AA878211	EST	2987176
Sequence 11356	AA878424	EST	2987389
Sequence 11357	AA889466	EST	3016345
Sequence 11358	AA902388	EST	3037511
Sequence 11359	AA902974	EST	3038097
Sequence 11360	AA903453	EST	3038576
Sequence 11361	AA905040	EST	3040163
Sequence 11362	AA922765	EST	3070074
Sequence 11363	AA929066	EST	3078045
Sequence 11364	AA935780	EST	3092937
Sequence 11365	AA935796	EST	3092953
Sequence 11366	AA939273	EST	3099186
Sequence 11367	AA946596	EST	3109991
Sequence 11368	AA961071	EST	3127625
Sequence 11369	AA962465	EST	3134629
Sequence 11370	AA973265	EST	3148445
Sequence 11371	AA975592	EST	3151384
Sequence 11372	AA977036	EST	3154482
Sequence 11373	AA977991	EST	3155437
Sequence 11374	AA989018	EST	3174589
Sequence 11375	AA993218	EST	3179763
Sequence 11376	AA993706	EST	3180251
Sequence 11377	AF109301	EST	6782694
Sequence 11378	AI002701	EST	3203115
Sequence 11379	AI002736	EST	3203150
Sequence 11380	AI016055	EST	3230391
Sequence 11381	AI017469	EST	3231805
Sequence 11382	AI018676	EST	3232474
Sequence 11383	AI025274	EST	3240887
Sequence 11384	AI027434	EST	3244950
Sequence 11385	AI028115	EST	3245424
Sequence 11386	AI028439	EST	3245748
Sequence 11387	AI033712	EST	3254665
Sequence 11388	AI034384	EST	3255337
Sequence 11389	AI034428	EST	3255381
Sequence 11390	AI039027	EST	3278221
Sequence 11391	AI039136	EST	3278330
Sequence 11392	AI039731	EST	3278925
Sequence 11393	AI040803	EST	3279997
Sequence 11394	AI051985	EST	3307976
Sequence 11395	AI052598	EST	3308589
Sequence 11396	AI053744	EST	3321531
Sequence 11397	AI056319	EST	3330185

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Sequence 11398	AI056324	EST	3330190
Sequence 11399	AI056337	EST	3330203
Sequence 11400	AI056351	EST	3330217
Sequence 11401	AI064691	EST	6358963
Sequence 11402	AI065139	EST	6359411
Sequence 11403	AI066536	EST	3367238
Sequence 11404	AI073929	EST	3400573
Sequence 11405	AI074143	EST	3400787
Sequence 11406	AI076009	EST	3405187
Sequence 11407	AI079555	EST	3415806
Sequence 11408	AI079831	EST	3416082
Sequence 11409	AI079885	EST	3416136
Sequence 11410	AI080266	EST	3416517
Sequence 11411	AI084035	EST	3422458
Sequence 11412	AI086937	EST	3425360
Sequence 11413	AI088270	EST	3427329
Sequence 11414	AI089408	EST	3428467
Sequence 11415	AI089953	EST	3429012
Sequence 11416	AI091326	EST	3430385
Sequence 11417	AI091580	EST	3430639
Sequence 11418	AI091864	EST	3430923
Sequence 11419	AI092638	EST	3431614
Sequence 11420	AI096462	EST	3445956
Sequence 11421	AI096678	EST	3446172
Sequence 11422	AI114651	EST	6359996
Sequence 11423	AI125541	EST	3594055
Sequence 11424	AI125669	EST	3594183
Sequence 11425	AI127461	EST	3595975
Sequence 11426	AI129721	EST	3598235
Sequence 11427	AI130978	EST	3600994
Sequence 11428	AI131385	EST	3601401
Sequence 11429	AI141972	EST	3649429
Sequence 11430	AI143723	EST	3665532
Sequence 11431	AI144216	EST	3666025
Sequence 11432	AI147846	EST	3675528
Sequence 11433	AI149616	EST	3678085
Sequence 11434	AI150878	EST	3679347
Sequence 11435	AI184622	EST	3735260
Sequence 11436	AI187296	EST	3737934
Sequence 11437	AI187413	EST	3738051
Sequence 11438	AI187993	EST	3739202
Sequence 11439	AI188768	EST	3739977
Sequence 11440	AI190574	EST	3741783
Sequence 11441	AI193729	EST	3744938
Sequence 11442	AI193879	EST	3745088
Sequence 11443	AI202702	EST	3755308
Sequence 11444	AI219886	EST	3802089
Sequence 11445	AI222521	EST	3804724
Sequence 11446	AI225043	EST	3807756
Sequence 11447	AI243691	EST	3839088
Sequence 11448	AI244187	EST	3839584
Sequence 11449	AI251103	EST	3847632
Sequence 11450	AI253330	EST	3850451
Sequence 11451	AI253436	EST	3850391
Sequence 11452	AI262640	EST	3870843
Sequence 11453	AI263331	EST	3871534

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Sequence 11454	AI267499	EST	3886666
Sequence 11455	AI269682	EST	3888849
Sequence 11456	AI270013	EST	3889180
Sequence 11457	AI271339	EST	3890506
Sequence 11458	AI271608	EST	3890775
Sequence 11459	AI273048	EST	3895316
Sequence 11460	AI275943	EST	3898217
Sequence 11461	AI278640	EST	3916874
Sequence 11462	AI278998	EST	3917232
Sequence 11463	AI280181	EST	3918414
Sequence 11464	AI281762	EST	3919995
Sequence 11465	AI282246	EST	3920479
Sequence 11466	AI282856	EST	3921089
Sequence 11467	AI284545	EST	3922778
Sequence 11468	AI289108	EST	3932372
Sequence 11469	AI290847	EST	3933621
Sequence 11470	AI301608	EST	3960954
Sequence 11471	AI306464	EST	3989535
Sequence 11472	AI308012	EST	4002647
Sequence 11473	AI312384	EST	4017989
Sequence 11474	AI339601	EST	4076528
Sequence 11475	AI347153	EST	4084359
Sequence 11476	AI352526	EST	4089732
Sequence 11477	AI356383	EST	4108004
Sequence 11478	AI358021	EST	4109642
Sequence 11479	AI358557	EST	4110178
Sequence 11480	AI359812	EST	4111433
Sequence 11481	AI362921	EST	4114542
Sequence 11482	AI366222	EST	4125911
Sequence 11483	AI393262	EST	4222809
Sequence 11484	AI393754	EST	4223301
Sequence 11485	AI400359	EST	4243446
Sequence 11486	AI417686	EST	4261190
Sequence 11487	AI420543	EST	4266474
Sequence 11488	AI436691	EST	4283721
Sequence 11489	AI439350	EST	4303707
Sequence 11490	AI468004	EST	4330094
Sequence 11491	AI469347	EST	4331437
Sequence 11492	AI469505	EST	4331595
Sequence 11493	AI469600	EST	4331690
Sequence 11494	AI472201	EST	4334291
Sequence 11495	AI478202	EST	4371428
Sequence 11496	AI479751	EST	4372919
Sequence 11497	AI480256	EST	4373424
Sequence 11498	AI497917	EST	4389899
Sequence 11499	AI499665	EST	4391647
Sequence 11500	AI521246	EST	4435381
Sequence 11501	AI525607	EST	4439742
Sequence 11502	AI539780	EST	4453915
Sequence 11503	AI559444	EST	4509649
Sequence 11504	AI559531	EST	4509736
Sequence 11505	AI565555	EST	4524012
Sequence 11506	AI570526	EST	4533900
Sequence 11507	AI582754	EST	4568651
Sequence 11508	AI608932	EST	4618099
Sequence 11509	AI608936	EST	4618103

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Sequence 11510	AI621173	EST	4630299
Sequence 11511	AI623863	EST	4648794
Sequence 11512	AI625152	EST	4650083
Sequence 11513	AI625819	EST	4650750
Sequence 11514	AI631996	EST	4683326
Sequence 11515	AI632955	EST	4684285
Sequence 11516	AI635397	EST	4686727
Sequence 11517	AI635756	EST	4687086
Sequence 11518	AI657111	EST	4741090
Sequence 11519	AI683799	EST	4893981
Sequence 11520	AI684760	EST	4896054
Sequence 11521	AI699114	EST	4987014
Sequence 11522	AI700656	EST	4988556
Sequence 11523	AI734838	EST	5056362
Sequence 11524	AI741189	EST	5109477
Sequence 11525	AI743974	EST	5112262
Sequence 11526	AI744342	EST	5112630
Sequence 11527	AI751021	EST	5129373
Sequence 11528	AI751175	EST	5129439
Sequence 11529	AI762495	EST	5178162
Sequence 11530	AI763344	EST	5179011
Sequence 11531	AI765690	EST	5232199
Sequence 11532	AI799995	EST	5365467
Sequence 11533	AI802542	EST	5368014
Sequence 11534	AI804082	EST	5369554
Sequence 11535	AI808503	EST	5395069
Sequence 11536	AI813654	EST	5424869
Sequence 11537	AI815499	EST	5431045
Sequence 11538	AI858089	EST	5511705
Sequence 11539	AI866603	EST	5530710
Sequence 11540	AI866803	EST	5530834
Sequence 11541	AI867464	EST	5540480
Sequence 11542	AI879010	EST	5553059
Sequence 11543	AI887361	EST	5592525
Sequence 11544	AI903990	EST	6494286
Sequence 11545	AI905002	EST	6495389
Sequence 11546	AI929357	EST	5665321
Sequence 11547	AI929483	EST	5665447
Sequence 11548	AI948496	EST	5740806
Sequence 11549	AI961342	EST	5754055
Sequence 11550	AI983520	EST	5810739
Sequence 11551	AJ133829	EST	4727122
Sequence 11552	AL036039	EST	5405665
Sequence 11553	AL036415	EST	5405971
Sequence 11554	AL037828	EST	5407161
Sequence 11555	AL039773	EST	5408788
Sequence 11556	AL042955	EST	5422386
Sequence 11557	AL043992	EST	5432220
Sequence 11558	AL048634	EST	4727722
Sequence 11559	AL119245	EST	5925144
Sequence 11560	AL120824	EST	5926825
Sequence 11561	AL134867	EST	6603054
Sequence 11562	AL135047	EST	6603234
Sequence 11563	AL138273	EST	6854954
Sequence 11564	AL138451	EST	6855132
Sequence 11565	AW003648	EST	5850564

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Sequence 11566	AW008029	EST	5856807
Sequence 11567	AW008048	EST	5856826
Sequence 11568	AW008782	EST	5857560
Sequence 11569	AW021322	EST	5874782
Sequence 11570	AW021588	EST	5875118
Sequence 11571	AW022159	EST	5875689
Sequence 11572	AW043631	EST	5904160
Sequence 11573	AW044310	EST	5904839
Sequence 11574	AW069285	EST	6024283
Sequence 11575	AW069315	EST	6024313
Sequence 11576	AW073580	EST	6028578
Sequence 11577	AW082238	EST	6037390
Sequence 11578	AW083099	EST	6038251
Sequence 11579	AW085581	EST	6040733
Sequence 11580	AW087200	EST	6043005
Sequence 11581	AW136642	EST	6140775
Sequence 11582	AW148690	EST	6196586
Sequence 11583	AW157858	EST	6229259
Sequence 11584	AW160706	EST	6299739
Sequence 11585	AW161328	EST	6300361
Sequence 11586	AW162943	EST	6301976
Sequence 11587	AW167129	EST	6398654
Sequence 11588	AW168050	EST	6399575
Sequence 11589	AW168184	EST	6399709
Sequence 11590	AW168400	EST	6399925
Sequence 11591	AW177050	EST	6443087
Sequence 11592	AW192594	EST	6471293
Sequence 11593	AW205906	EST	6505380
Sequence 11594	AW247236	EST	6590229
Sequence 11595	AW250104	EST	6593097
Sequence 11596	AW294606	EST	6701242
Sequence 11597	AW294626	EST	6701262
Sequence 11598	AW297943	EST	6704579
Sequence 11599	AW302841	EST	6712521
Sequence 11600	AW337419	EST	6834045
Sequence 11601	AW363949	EST	6868599
Sequence 11602	AW363975	EST	6868625
Sequence 11603	AW365134	EST	6869784
Sequence 11604	AW365960	EST	6870610
Sequence 11605	AW368992	EST	6873642
Sequence 11606	AW376614	EST	6881275
Sequence 11607	AW380617	EST	6885276
Sequence 11608	AW380631	EST	6885290
Sequence 11609	AW381959	EST	6886618
Sequence 11610	AW386920	EST	6891579
Sequence 11611	AW401953	EST	6920639
Sequence 11612	AW402499	EST	6921188
Sequence 11613	AW450642	EST	6991418
Sequence 11614	AW452921	EST	6993697
Sequence 11615	AW499890	EST	7111988
Sequence 11616	AW503119	EST	7118224
Sequence 11617	AW518064	EST	N/A
Sequence 11618	AW573593	EST	7238326
Sequence 11619	AW574740	EST	7246279
Sequence 11620	AW575094	EST	7246633
Sequence 11621	AW576694	EST	7251834



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Sequence 11622	AW579819	EST	7254868
Sequence 11623	D44813	EST	1572288
Sequence 11624	D55269	EST	957166
Sequence 11625	D80421	EST	1178298
Sequence 11626	F07786	EST	677286
Sequence 11627	F20959	EST	2060135
Sequence 11628	F22113	EST	2061289
Sequence 11629	H01421	EST	864354
Sequence 11630	H11779	EST	876599
Sequence 11631	H16460	EST	881280
Sequence 11632	H16546	EST	882771
Sequence 11633	H18560	EST	884800
Sequence 11634	H22094	EST	890789
Sequence 11635	H40387	EST	916439
Sequence 11636	H54240	EST	994387
Sequence 11637	H68450	EST	1027190
Sequence 11638	H90819	EST	1081249
Sequence 11639	H94986	EST	1102619
Sequence 11640	L44419	EST	1048740
Sequence 11641	N20934	EST	1126104
Sequence 11642	N21624	EST	1126794
Sequence 11643	N23545	EST	1137695
Sequence 11644	N26941	EST	1141289
Sequence 11645	N28426	EST	1146662
Sequence 11646	N31770	EST	1152169
Sequence 11647	N40973	EST	1164571
Sequence 11648	N44346	EST	1182865
Sequence 11649	N54935	EST	1196255
Sequence 11650	N71715	EST	1228427
Sequence 11651	N80408	EST	1243109
Sequence 11652	R17938	EST	771548
Sequence 11653	R82925	EST	927634
Sequence 11654	R93415	EST	967581
Sequence 11655	R93745	EST	967911
Sequence 11656	T30702	EST	612800
Sequence 11657	T48489	EST	642689
Sequence 11658	T77803	EST	695006
Sequence 11659	T89533	EST	718046
Sequence 11660	W01580	EST	1273634
Sequence 11661	W01785	EST	1273784
Sequence 11662	W02490	EST	1274488
Sequence 11663	W33011	EST	1315016
Sequence 11664	W79178	EST	1390613
Sequence 11665	V60015	NUCPATENT	N/A
Sequence 11666	V86392	NUCPATENT	N/A
Sequence 11667	X40046	NUCPATENT	N/A
Sequence 11668	X83330	NUCPATENT	949933
Sequence 11669	X87396	NUCPATENT	1304366
Sequence 11670	X97973	NUCPATENT	1360128
Sequence 11671	X98409	NUCPATENT	1403131
Sequence 11672	Z33373	NUCPATENT	534033
Sequence 11673	Z33622	NUCPATENT	608977
Sequence 11674	Z33656	NUCPATENT	488829
Sequence 11675	Z39728	NUCPATENT	565523
Sequence 11676	AC02994	PREPATNUC	N/A
Sequence 11677	AC31122	PREPATNUC	N/A

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Sequence 11678	AC34163	PREPATNUC	N/A
Sequence 11679	AC35230	PREPATNUC	N/A
Sequence 11680	AC36946	PREPATNUC	N/A
Sequence 11681	A02759	Genbank	345130
Sequence 11682	A16794	Genbank	512417
Sequence 11683	A17003	Genbank	512419
Sequence 11684	A20255	Genbank	1247401
Sequence 11685	A36460	Genbank	2293778
Sequence 11686	AB000584	Genbank	1813326
Sequence 11687	AB001535	Genbank	3928755
Sequence 11688	AB002308	Genbank	6634012
Sequence 11689	AB002321	Genbank	2224586
Sequence 11690	AB002323	Genbank	2224590
Sequence 11691	AB002387	Genbank	2224718
Sequence 11692	AB002390	Genbank	2280487
Sequence 11693	AB002533	Genbank	1944124
Sequence 11694	AB003102	Genbank	1945608
Sequence 11695	AB003151	Genbank	3702678
Sequence 11696	AB003698	Genbank	2102636
Sequence 11697	AB003730	Genbank	2627128
Sequence 11698	AB007166	Genbank	3077761
Sequence 11699	AB007882	Genbank	2887418
Sequence 11700	AB007887	Genbank	2887428
Sequence 11701	AB007916	Genbank	6683704
Sequence 11702	AB007917	Genbank	3413857
Sequence 11703	AB007922	Genbank	6634036
Sequence 11704	AB007938	Genbank	3413899
Sequence 11705	AB010882	Genbank	2967451
Sequence 11706	AB011004	Genbank	3273315
Sequence 11707	AB011083	Genbank	3043545
Sequence 11708	AB011111	Genbank	3043601
Sequence 11709	AB011139	Genbank	3043657
Sequence 11710	AB011420	Genbank	3834353
Sequence 11711	AB014077	Genbank	5672586
Sequence 11712	AB014554	Genbank	3327121
Sequence 11713	AB015639	Genbank	5821139
Sequence 11714	AB017004	Genbank	4239949
Sequence 11715	AB017103	Genbank	3493334
Sequence 11716	AB017335	Genbank	3582440
Sequence 11717	AB017708	Genbank	3650434
Sequence 11718	AB018260	Genbank	3882154
Sequence 11719	AB018265	Genbank	3882164
Sequence 11720	AB018267	Genbank	3882168
Sequence 11721	AB018304	Genbank	3882242
Sequence 11722	AB018330	Genbank	3882294
Sequence 11723	AB018344	Genbank	3882322
Sequence 11724	AB019524	Genbank	4519939
Sequence 11725	AB019568	Genbank	3885371
Sequence 11726	AB020662	Genbank	4240198
Sequence 11727	AB020679	Genbank	4240232
Sequence 11728	AB020684	Genbank	4240242
Sequence 11729	AB020686	Genbank	4240246
Sequence 11730	AB020692	Genbank	4240258
Sequence 11731	AB020697	Genbank	4240268
Sequence 11732	AB020715	Genbank	4240304
Sequence 11733	AB020858	Genbank	4003378

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Sequence 11734	AB020861	Genbank	4003381
Sequence 11735	AB021288	Genbank	4038732
Sequence 11736	AB021467	Genbank	4586518
Sequence 11737	AB021663	Genbank	4996450
Sequence 11738	AB022435	Genbank	4996607
Sequence 11739	AB022537	Genbank	6942217
Sequence 11740	AB023050	Genbank	5672605
Sequence 11741	AB023691	Genbank	6519222
Sequence 11742	AB023699	Genbank	6519298
Sequence 11743	AB024334	Genbank	6016837
Sequence 11744	AB026894	Genbank	5821423
Sequence 11745	AB027466	Genbank	6172220
Sequence 11746	AB028859	Genbank	6567165
Sequence 11747	AB029003	Genbank	5689496
Sequence 11748	AB029347	Genbank	5921132
Sequence 11749	AB029551	Genbank	6714542
Sequence 11750	AB032417	Genbank	6277265
Sequence 11751	AB032969	Genbank	6329965
Sequence 11752	AB032975	Genbank	6330044
Sequence 11753	AB033070	Genbank	6330818
Sequence 11754	AB033076	Genbank	6330860
Sequence 11755	AB033079	Genbank	6382025
Sequence 11756	AB033082	Genbank	6330910
Sequence 11757	AB033117	Genbank	6331435
Sequence 11758	AB034205	Genbank	6899845
Sequence 11759	AB037744	Genbank	7243026
Sequence 11760	AB037757	Genbank	7243052
Sequence 11761	AB037763	Genbank	7243064
Sequence 11762	AB037767	Genbank	7243072
Sequence 11763	AB037807	Genbank	7243152
Sequence 11764	AB037849	Genbank	7243236
Sequence 11765	AC000040	Genbank	7923866
Sequence 11766	AC000083	Genbank	3810636
Sequence 11767	AC000093	Genbank	4678240
Sequence 11768	AC000120	Genbank	1809224
Sequence 11769	AC000353	Genbank	6970735
Sequence 11770	AC000378	Genbank	2270906
Sequence 11771	AC000394	Genbank	2133911
Sequence 11772	AC001226	Genbank	2133862
Sequence 11773	AC002039	Genbank	2342716
Sequence 11774	AC002040	Genbank	2347081
Sequence 11775	AC002064	Genbank	2076723
Sequence 11776	AC002069	Genbank	2076718
Sequence 11777	AC002094	Genbank	2155224
Sequence 11778	AC002117	Genbank	2281075
Sequence 11779	AC002401	Genbank	2599240
Sequence 11780	AC002470	Genbank	6478944
Sequence 11781	AC002481	Genbank	2340092
Sequence 11782	AC002544	Genbank	3337382
Sequence 11783	AC003041	Genbank	3264572
Sequence 11784	AC003103	Genbank	2842782
Sequence 11785	AC003109	Genbank	2961444
Sequence 11786	AC003111	Genbank	2636670
Sequence 11787	AC003682	Genbank	3264845
Sequence 11788	AC003688	Genbank	3789719
Sequence 11789	AC003964	Genbank	2981253

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Sequence 11790	AC003989	Genbank	2772538
Sequence 11791	AC003999	Genbank	2772566
Sequence 11792	AC004006	Genbank	2781390
Sequence 11793	AC004039	Genbank	2811101
Sequence 11794	AC004049	Genbank	3366580
Sequence 11795	AC004050	Genbank	4001528
Sequence 11796	AC004098	Genbank	3097872
Sequence 11797	AC004131	Genbank	3342217
Sequence 11798	AC004142	Genbank	2880078
Sequence 11799	AC004148	Genbank	3482960
Sequence 11800	AC004150	Genbank	4585948
Sequence 11801	AC004156	Genbank	2896799
Sequence 11802	AC004221	Genbank	9665053
Sequence 11803	AC004228	Genbank	4263838
Sequence 11804	AC004258	Genbank	2924759
Sequence 11805	AC004263	Genbank	2935616
Sequence 11806	AC004381	Genbank	2982169
Sequence 11807	AC004408	Genbank	3873185
Sequence 11808	AC004467	Genbank	3132844
Sequence 11809	AC004472	Genbank	2984582
Sequence 11810	AC004474	Genbank	3097873
Sequence 11811	AC004509	Genbank	2996628
Sequence 11812	AC004520	Genbank	3004572
Sequence 11813	AC004525	Genbank	3219333
Sequence 11814	AC004527	Genbank	4760422
Sequence 11815	AC004530	Genbank	3108050
Sequence 11816	AC004531	Genbank	3337392
Sequence 11817	AC004552	Genbank	3273378
Sequence 11818	AC004583	Genbank	3293210
Sequence 11819	AC004584	Genbank	3417305
Sequence 11820	AC004643	Genbank	3097841
Sequence 11821	AC004656	Genbank	3253114
Sequence 11822	AC004660	Genbank	3108018
Sequence 11823	AC004686	Genbank	3688105
Sequence 11824	AC004742	Genbank	3152630
Sequence 11825	AC004749	Genbank	3157918
Sequence 11826	AC004754	Genbank	3165400
Sequence 11827	AC004771	Genbank	3668108
Sequence 11828	AC004776	Genbank	3169299
Sequence 11829	AC004810	Genbank	3264567
Sequence 11830	AC004812	Genbank	3970970
Sequence 11831	AC004821	Genbank	4753291
Sequence 11832	AC004832	Genbank	6624129
Sequence 11833	AC004839	Genbank	3983571
Sequence 11834	AC004841	Genbank	4454523
Sequence 11835	AC004846	Genbank	7243869
Sequence 11836	AC004854	Genbank	4827328
Sequence 11837	AC004858	Genbank	6624125
Sequence 11838	AC004859	Genbank	5091656
Sequence 11839	AC004883	Genbank	4263746
Sequence 11840	AC004890	Genbank	4508146
Sequence 11841	AC004904	Genbank	4156180
Sequence 11842	AC004912	Genbank	4156178
Sequence 11843	AC004943	Genbank	3924671
Sequence 11844	AC004950	Genbank	4753269
Sequence 11845	AC004985	Genbank	5708490

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Sequence 11846	AC004990	Genbank	3924668
Sequence 11847	AC004999	Genbank	3970963
Sequence 11848	AC005034	Genbank	3947437
Sequence 11849	AC005037	Genbank	4827310
Sequence 11850	AC005041	Genbank	4508118
Sequence 11851	AC005042	Genbank	4156138
Sequence 11852	AC005084	Genbank	3659503
Sequence 11853	AC005089	Genbank	5732140
Sequence 11854	AC005104	Genbank	4218027
Sequence 11855	AC005153	Genbank	3242766
Sequence 11856	AC005210	Genbank	6249673
Sequence 11857	AC005257	Genbank	3289994
Sequence 11858	AC005263	Genbank	3289978
Sequence 11859	AC005318	Genbank	3885345
Sequence 11860	AC005324	Genbank	3366582
Sequence 11861	AC005329	Genbank	3342732
Sequence 11862	AC005332	Genbank	3659494
Sequence 11863	AC005369	Genbank	3367505
Sequence 11864	AC005382	Genbank	3386587
Sequence 11865	AC005488	Genbank	5836194
Sequence 11866	AC005550	Genbank	3478668
Sequence 11867	AC005614	Genbank	3540175
Sequence 11868	AC005621	Genbank	3548788
Sequence 11869	AC005627	Genbank	7243867
Sequence 11870	AC005629	Genbank	7243877
Sequence 11871	AC005630	Genbank	4159882
Sequence 11872	AC005661	Genbank	3818348
Sequence 11873	AC005702	Genbank	3688100
Sequence 11874	AC005726	Genbank	3810672
Sequence 11875	AC005786	Genbank	3702287
Sequence 11876	AC005789	Genbank	3702281
Sequence 11877	AC005837	Genbank	3849820
Sequence 11878	AC005838	Genbank	3947427
Sequence 11879	AC005841	Genbank	4731044
Sequence 11880	AC005912	Genbank	4165005
Sequence 11881	AC005971	Genbank	4314421
Sequence 11882	AC006008	Genbank	5091655
Sequence 11883	AC006014	Genbank	4699959
Sequence 11884	AC006017	Genbank	4508141
Sequence 11885	AC006040	Genbank	4314426
Sequence 11886	AC006057	Genbank	4731048
Sequence 11887	AC006115	Genbank	3962498
Sequence 11888	AC006137	Genbank	9887710
Sequence 11889	AC006160	Genbank	5701616
Sequence 11890	AC006213	Genbank	4160143
Sequence 11891	AC006230	Genbank	4966389
Sequence 11892	AC006255	Genbank	5306223
Sequence 11893	AC006273	Genbank	4096060
Sequence 11894	AC006299	Genbank	4106997
Sequence 11895	AC006475	Genbank	4753283
Sequence 11896	AC006477	Genbank	7243871
Sequence 11897	AC006480	Genbank	6289252
Sequence 11898	AC006512	Genbank	4926863
Sequence 11899	AC006566	Genbank	4309780
Sequence 11900	AC006581	Genbank	4914350
Sequence 11901	AC007032	Genbank	5523832

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Sequence 11902	AC007041	Genbank	5708471
Sequence 11903	AC007055	Genbank	4885691
Sequence 11904	AC007066	Genbank	4508098
Sequence 11905	AC007073	Genbank	4416547
Sequence 11906	AC007172	Genbank	4731066
Sequence 11907	AC007191	Genbank	4558643
Sequence 11908	AC007225	Genbank	6715703
Sequence 11909	AC007253	Genbank	5649375
Sequence 11910	AC007384	Genbank	5708473
Sequence 11911	AC007406	Genbank	4689442
Sequence 11912	AC007528	Genbank	5263309
Sequence 11913	AC007537	Genbank	4914348
Sequence 11914	AC007541	Genbank	4982536
Sequence 11915	AC007564	Genbank	4982534
Sequence 11916	AC007565	Genbank	4835751
Sequence 11917	AC007736	Genbank	5732177
Sequence 11918	AC007938	Genbank	5306288
Sequence 11919	AC007999	Genbank	7007656
Sequence 11920	AC008044	Genbank	6015188
Sequence 11921	AC008101	Genbank	6970743
Sequence 11922	AC008102	Genbank	9797815
Sequence 11923	AC008122	Genbank	5931373
Sequence 11924	AC008123	Genbank	6006046
Sequence 11925	AC008269	Genbank	7243890
Sequence 11926	AC008498	Genbank	6850299
Sequence 11927	AC008893	Genbank	7259691
Sequence 11928	AC009330	Genbank	6553960
Sequence 11929	AC010206	Genbank	6539154
Sequence 11930	AC010582	Genbank	6721135
Sequence 11931	AC011331	Genbank	9929686
Sequence 11932	AC012087	Genbank	7114465
Sequence 11933	AC020663	Genbank	6682593
Sequence 11934	AC021049	Genbank	7248920
Sequence 11935	AF001549	Genbank	3355302
Sequence 11936	AF001977	Genbank	2914738
Sequence 11937	AF002668	Genbank	2232173
Sequence 11938	AF003837	Genbank	2228792
Sequence 11939	AF004162	Genbank	3046385
Sequence 11940	AF004339	Genbank	2245559
Sequence 11941	AF004341	Genbank	2245563
Sequence 11942	AF004342	Genbank	2245565
Sequence 11943	AF005896	Genbank	2209244
Sequence 11944	AF006083	Genbank	2282031
Sequence 11945	AF007544	Genbank	2970122
Sequence 11946	AF007835	Genbank	4102034
Sequence 11947	AF008303	Genbank	2580619
Sequence 11948	AF011889	Genbank	2335186
Sequence 11949	AF012023	Genbank	2305237
Sequence 11950	AF012072	Genbank	9967556
Sequence 11951	AF012126	Genbank	2832227
Sequence 11952	AF015812	Genbank	2599359
Sequence 11953	AF016709	Genbank	2731560
Sequence 11954	AF019413	Genbank	2347130
Sequence 11955	AF020057	Genbank	3150436
Sequence 11956	AF020351	Genbank	2655052
Sequence 11957	AF020352	Genbank	2655054

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Sequence 11958	AF021819	Genbank	2460317
Sequence 11959	AF022913	Genbank	2558890
Sequence 11960	AF026292	Genbank	2559009
Sequence 11961	AF026816	Genbank	2583078
Sequence 11962	AF028832	Genbank	3287488
Sequence 11963	AF030186	Genbank	3831546
Sequence 11964	AF032387	Genbank	2641556
Sequence 11965	AF033095	Genbank	2645728
Sequence 11966	AF035840	Genbank	3800739
Sequence 11967	AF036715	Genbank	4007385
Sequence 11968	AF038178	Genbank	2795898
Sequence 11969	AF038200	Genbank	2795921
Sequence 11970	AF038554	Genbank	2895558
Sequence 11971	AF038633	Genbank	3252876
Sequence 11972	AF038955	Genbank	3329379
Sequence 11973	AF041483	Genbank	3493528
Sequence 11974	AF042166	Genbank	3298596
Sequence 11975	AF042836	Genbank	3776241
Sequence 11976	AF044957	Genbank	4164445
Sequence 11977	AF044958	Genbank	4164447
Sequence 11978	AF047185	Genbank	2909861
Sequence 11979	AF047440	Genbank	3335135
Sequence 11980	AF047472	Genbank	2921872
Sequence 11981	AF049105	Genbank	2984656
Sequence 11982	AF051316	Genbank	6580759
Sequence 11983	AF051894	Genbank	3095110
Sequence 11984	AF052129	Genbank	3360438
Sequence 11985	AF052642	Genbank	2981453
Sequence 11986	AF053356	Genbank	3135305
Sequence 11987	AF054984	Genbank	3005692
Sequence 11988	AF054990	Genbank	3005703
Sequence 11989	AF055473	Genbank	nil
Sequence 11990	AF055474	Genbank	nil
Sequence 11991	AF061737	Genbank	4335938
Sequence 11992	AF064019	Genbank	3347856
Sequence 11993	AF064084	Genbank	3135668
Sequence 11994	AF064245	Genbank	3930528
Sequence 11995	AF064861	Genbank	3171154
Sequence 11996	AF067517	Genbank	3850313
Sequence 11997	AF067844	Genbank	4240386
Sequence 11998	AF068754	Genbank	3283408
Sequence 11999	AF069378	Genbank	3982733
Sequence 12000	AF070646	Genbank	3283920
Sequence 12001	AF070649	Genbank	3283923
Sequence 12002	AF070652	Genbank	4454679
Sequence 12003	AF070655	Genbank	4454685
Sequence 12004	AF073792	Genbank	3300101
Sequence 12005	AF075053	Genbank	3377594
Sequence 12006	AF075242	Genbank	4377992
Sequence 12007	AF077042	Genbank	4689131
Sequence 12008	AF077043	Genbank	4689133
Sequence 12009	AF077046	Genbank	4689139
Sequence 12010	AF077052	Genbank	4689151
Sequence 12011	AF077202	Genbank	4679017
Sequence 12012	AF078855	Genbank	5531824
Sequence 12013	AF081282	Genbank	4336324

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Sequence 12014	AF083441	Genbank	5813822
Sequence 12015	AF085361	Genbank	5114056
Sequence 12016	AF086168	Genbank	3483513
Sequence 12017	AF086169	Genbank	3483514
Sequence 12018	AF086210	Genbank	3483555
Sequence 12019	AF086236	Genbank	3483581
Sequence 12020	AF086329	Genbank	3483674
Sequence 12021	AF086465	Genbank	3483810
Sequence 12022	AF086557	Genbank	3483902
Sequence 12023	AF091075	Genbank	3859987
Sequence 12024	AF091083	Genbank	3860003
Sequence 12025	AF091084	Genbank	3860005
Sequence 12026	AF092124	Genbank	3659900
Sequence 12027	AF092135	Genbank	5138919
Sequence 12028	AF098162	Genbank	3929582
Sequence 12029	AF098865	Genbank	4204674
Sequence 12030	AF100748	Genbank	5410281
Sequence 12031	AF100928	Genbank	4323586
Sequence 12032	AF103801	Genbank	6048969
Sequence 12033	AF105278	Genbank	4324471
Sequence 12034	AF107893	Genbank	4008128
Sequence 12035	AF109872	Genbank	4028621
Sequence 12036	AF110304	Genbank	7106722
Sequence 12037	AF110460	Genbank	4324698
Sequence 12038	AF110774	Genbank	6523794
Sequence 12039	AF111847	Genbank	7211441
Sequence 12040	AF112215	Genbank	6563217
Sequence 12041	AF112222	Genbank	6563229
Sequence 12042	AF113016	Genbank	6642755
Sequence 12043	AF113680	Genbank	6855605
Sequence 12044	AF113700	Genbank	6855634
Sequence 12045	AF117235	Genbank	6563243
Sequence 12046	AF117829	Genbank	4151947
Sequence 12047	AF118091	Genbank	6650827
Sequence 12048	AF119663	Genbank	6563251
Sequence 12049	AF121219	Genbank	4903275
Sequence 12050	AF122004	Genbank	5059061
Sequence 12051	AF128536	Genbank	5305705
Sequence 12052	AF129927	Genbank	4558506
Sequence 12053	AF130249	Genbank	4455134
Sequence 12054	AF131738	Genbank	4406548
Sequence 12055	AF131838	Genbank	4406677
Sequence 12056	AF131856	Genbank	4406702
Sequence 12057	AF132965	Genbank	4680700
Sequence 12058	AF132973	Genbank	4680716
Sequence 12059	AF139065	Genbank	6635330
Sequence 12060	AF144700	Genbank	5107075
Sequence 12061	AF144755	Genbank	5006628
Sequence 12062	AF146191	Genbank	5678818
Sequence 12063	AF147330	Genbank	4761681
Sequence 12064	AF150089	Genbank	5107165
Sequence 12065	AF151020	Genbank	7106761
Sequence 12066	AF151066	Genbank	7106853
Sequence 12067	AF151109	Genbank	6166337
Sequence 12068	AF151807	Genbank	4929566
Sequence 12069	AF151832	Genbank	4929616



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Sequence 12070	AF151841	Genbank	4929634
Sequence 12071	AF151861	Genbank	4929674
Sequence 12072	AF151875	Genbank	4929702
Sequence 12073	AF151879	Genbank	4929710
Sequence 12074	AF151884	Genbank	4929720
Sequence 12075	AF151886	Genbank	4929724
Sequence 12076	AF151889	Genbank	4929730
Sequence 12077	AF151893	Genbank	4929738
Sequence 12078	AF151905	Genbank	4929762
Sequence 12079	AF151906	Genbank	4929764
Sequence 12080	AF152462	Genbank	5565976
Sequence 12081	AF155568	Genbank	5031511
Sequence 12082	AF156965	Genbank	5731112
Sequence 12083	AF161389	Genbank	6841191
Sequence 12084	AF161448	Genbank	6841309
Sequence 12085	AF161466	Genbank	6841455
Sequence 12086	AF161500	Genbank	6841523
Sequence 12087	AF161503	Genbank	6841529
Sequence 12088	AF161512	Genbank	6841547
Sequence 12089	AF161556	Genbank	6841379
Sequence 12090	AF165926	Genbank	5817858
Sequence 12091	AF168787	Genbank	7239175
Sequence 12092	AF168956	Genbank	5702387
Sequence 12093	AF174496	Genbank	7108914
Sequence 12094	AF176574	Genbank	5762481
Sequence 12095	AF179274	Genbank	5911402
Sequence 12096	AF187320	Genbank	6164847
Sequence 12097	AF187554	Genbank	6653225
Sequence 12098	AF188178	Genbank	6164864
Sequence 12099	AF188745	Genbank	6425043
Sequence 12100	AF191018	Genbank	6457339
Sequence 12101	AF191298	Genbank	7656642
Sequence 12102	AF196969	Genbank	6289073
Sequence 12103	AF201077	Genbank	6456748
Sequence 12104	AF203815	Genbank	6979641
Sequence 12105	AF205588	Genbank	6531675
Sequence 12106	AF205600	Genbank	6581094
Sequence 12107	AF207550	Genbank	6470333
Sequence 12108	AF217403	Genbank	6691160
Sequence 12109	AF224669	Genbank	7012905
Sequence 12110	AJ001981	Genbank	2546978
Sequence 12111	AJ010069	Genbank	3483012
Sequence 12112	AJ010341	Genbank	4490794
Sequence 12113	AJ011803	Genbank	4753760
Sequence 12114	AJ012499	Genbank	5441359
Sequence 12115	AJ131693	Genbank	4584422
Sequence 12116	AJ224442	Genbank	2911586
Sequence 12117	AJ243669	Genbank	6688156
Sequence 12118	AJ249731	Genbank	5921469
Sequence 12119	AJ250042	Genbank	6013005
Sequence 12120	AJ250915	Genbank	6996445
Sequence 12121	AK000049	Genbank	7019880
Sequence 12122	AK000052	Genbank	7019885
Sequence 12123	AK000068	Genbank	7019914
Sequence 12124	AK000083	Genbank	7019940
Sequence 12125	AK000171	Genbank	7020084

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Sequence 12126	AK000221	Genbank	7020163
Sequence 12127	AK000303	Genbank	7020295
Sequence 12128	AK000319	Genbank	7020324
Sequence 12129	AK000395	Genbank	7020455
Sequence 12130	AK000400	Genbank	7020463
Sequence 12131	AK000434	Genbank	7020520
Sequence 12132	AK000462	Genbank	7020566
Sequence 12133	AK000470	Genbank	7020580
Sequence 12134	AK000526	Genbank	7020680
Sequence 12135	AK000560	Genbank	7020738
Sequence 12136	AK000615	Genbank	7020827
Sequence 12137	AK000620	Genbank	7020834
Sequence 12138	AK000624	Genbank	7020839
Sequence 12139	AK000656	Genbank	7020889
Sequence 12140	AK000667	Genbank	7020906
Sequence 12141	AK000669	Genbank	7020909
Sequence 12142	AK000818	Genbank	7021128
Sequence 12143	AK000931	Genbank	7021906
Sequence 12144	AK001067	Genbank	7022104
Sequence 12145	AK001088	Genbank	7022136
Sequence 12146	AK001163	Genbank	7022244
Sequence 12147	AK001192	Genbank	7022292
Sequence 12148	AK001221	Genbank	7022340
Sequence 12149	AK001321	Genbank	7022503
Sequence 12150	AK001338	Genbank	7022533
Sequence 12151	AK001354	Genbank	7022561
Sequence 12152	AK001408	Genbank	7022645
Sequence 12153	AK001441	Genbank	7022699
Sequence 12154	AK001453	Genbank	7022720
Sequence 12155	AK001489	Genbank	7022777
Sequence 12156	AK001510	Genbank	7022808
Sequence 12157	AK001536	Genbank	7022851
Sequence 12158	AK001564	Genbank	7022893
Sequence 12159	AK001614	Genbank	7022977
Sequence 12160	AK001689	Genbank	7023104
Sequence 12161	AK001718	Genbank	7023153
Sequence 12162	AK001764	Genbank	7023235
Sequence 12163	AK001780	Genbank	7023265
Sequence 12164	AK001902	Genbank	7023455
Sequence 12165	AK002031	Genbank	7023667
Sequence 12166	AK002100	Genbank	7023777
Sequence 12167	AL008721	Genbank	3171883
Sequence 12168	AL008723	Genbank	5101762
Sequence 12169	AL009179	Genbank	3217024
Sequence 12170	AL020993	Genbank	3980107
Sequence 12171	AL020997	Genbank	2804155
Sequence 12172	AL021368	Genbank	3080468
Sequence 12173	AL021397	Genbank	3319943
Sequence 12174	AL021707	Genbank	4582132
Sequence 12175	AL021917	Genbank	9367203
Sequence 12176	AL022153	Genbank	3319674
Sequence 12177	AL022238	Genbank	4176442
Sequence 12178	AL022240	Genbank	4826471
Sequence 12179	AL022313	Genbank	4200326
Sequence 12180	AL022326	Genbank	3550039
Sequence 12181	AL022718	Genbank	3763969

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Sequence 12182	AL022725	Genbank	5679748
Sequence 12183	AL023581	Genbank	3445283
Sequence 12184	AL023582	Genbank	3805923
Sequence 12185	AL023803	Genbank	9408726
Sequence 12186	AL023807	Genbank	5679750
Sequence 12187	AL024474	Genbank	3395511
Sequence 12188	AL031005	Genbank	3287156
Sequence 12189	AL031256	Genbank	3738133
Sequence 12190	AL031274	Genbank	3421083
Sequence 12191	AL031295	Genbank	4376011
Sequence 12192	AL031297	Genbank	4902714
Sequence 12193	AL031427	Genbank	4835258
Sequence 12194	AL031432	Genbank	4375969
Sequence 12195	AL031665	Genbank	4826504
Sequence 12196	AL031681	Genbank	9408729
Sequence 12197	AL031718	Genbank	5805110
Sequence 12198	AL031774	Genbank	3881948
Sequence 12199	AL033377	Genbank	4826462
Sequence 12200	AL033397	Genbank	4902626
Sequence 12201	AL033517	Genbank	4140315
Sequence 12202	AL033522	Genbank	4191258
Sequence 12203	AL033531	Genbank	6807582
Sequence 12204	AL034548	Genbank	7263904
Sequence 12205	AL035209	Genbank	4160217
Sequence 12206	AL035249	Genbank	4688857
Sequence 12207	AL035398	Genbank	5262352
Sequence 12208	AL035411	Genbank	6136940
Sequence 12209	AL035413	Genbank	6010110
Sequence 12210	AL035454	Genbank	9368364
Sequence 12211	AL035458	Genbank	6624641
Sequence 12212	AL035461	Genbank	5123778
Sequence 12213	AL035541	Genbank	9581764
Sequence 12214	AL035610	Genbank	6249454
Sequence 12215	AL035699	Genbank	4826515
Sequence 12216	AL049280	Genbank	4500037
Sequence 12217	AL049294	Genbank	4500055
Sequence 12218	AL049447	Genbank	4500230
Sequence 12219	AL049461	Genbank	4500250
Sequence 12220	AL049552	Genbank	6010194
Sequence 12221	AL049564	Genbank	4902757
Sequence 12222	AL049646	Genbank	9368462
Sequence 12223	AL049694	Genbank	5650653
Sequence 12224	AL049748	Genbank	6572235
Sequence 12225	AL049766	Genbank	5763746
Sequence 12226	AL049779	Genbank	8176894
Sequence 12227	AL049829	Genbank	8217859
Sequence 12228	AL049844	Genbank	5924019
Sequence 12229	AL049849	Genbank	4826529
Sequence 12230	AL049869	Genbank	8217861
Sequence 12231	AL049870	Genbank	7248268
Sequence 12232	AL049911	Genbank	6114591
Sequence 12233	AL049944	Genbank	4884189
Sequence 12234	AL049962	Genbank	4884212
Sequence 12235	AL049964	Genbank	4884214
Sequence 12236	AL049968	Genbank	4884217
Sequence 12237	AL050016	Genbank	4884262

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Sequence 12238	AL050089	Genbank	4884107
Sequence 12239	AL050275	Genbank	4886500
Sequence 12240	AL050277	Genbank	4886454
Sequence 12241	AL050343	Genbank	6137008
Sequence 12242	AL078463	Genbank	5777575
Sequence 12243	AL078621	Genbank	6013067
Sequence 12244	AL079333	Genbank	5738434
Sequence 12245	AL080080	Genbank	5262491
Sequence 12246	AL080102	Genbank	5262526
Sequence 12247	AL080193	Genbank	5262674
Sequence 12248	AL080276	Genbank	5763753
Sequence 12249	AL109672	Genbank	5689836
Sequence 12250	AL109759	Genbank	8176900
Sequence 12251	AL109798	Genbank	6453386
Sequence 12252	AL109865	Genbank	6911646
Sequence 12253	AL110183	Genbank	5817095
Sequence 12254	AL110185	Genbank	5817098
Sequence 12255	AL110193	Genbank	5817109
Sequence 12256	AL110194	Genbank	5817111
Sequence 12257	AL110202	Genbank	5817121
Sequence 12258	AL110271	Genbank	5817083
Sequence 12259	AL117350	Genbank	7159817
Sequence 12260	AL117450	Genbank	5911900
Sequence 12261	AL117461	Genbank	5911922
Sequence 12262	AL117482	Genbank	5911960
Sequence 12263	AL117648	Genbank	5912240
Sequence 12264	AL117662	Genbank	5912257
Sequence 12265	AL121603	Genbank	6434634
Sequence 12266	AL121652	Genbank	7159615
Sequence 12267	AL121716	Genbank	7159797
Sequence 12268	AL121790	Genbank	8919824
Sequence 12269	AL121823	Genbank	6635879
Sequence 12270	AL121852	Genbank	8176919
Sequence 12271	AL121963	Genbank	7161783
Sequence 12272	AL122036	Genbank	6093222
Sequence 12273	AL122066	Genbank	6102860
Sequence 12274	AL133010	Genbank	6453416
Sequence 12275	AL133060	Genbank	6453483
Sequence 12276	AL133069	Genbank	6453507
Sequence 12277	AL133215	Genbank	7228177
Sequence 12278	AL133216	Genbank	6983473
Sequence 12279	AL133387	Genbank	7076389
Sequence 12280	AL133453	Genbank	7009594
Sequence 12281	AL133593	Genbank	6599181
Sequence 12282	AL133662	Genbank	6599256
Sequence 12283	AL135744	Genbank	6682291
Sequence 12284	AL135959	Genbank	6635874
Sequence 12285	AL136296	Genbank	8217913
Sequence 12286	AL136504	Genbank	7018294
Sequence 12287	AL136831	Genbank	6807666
Sequence 12288	AL137269	Genbank	6807703
Sequence 12289	AL137450	Genbank	6808024
Sequence 12290	AL137454	Genbank	6808031
Sequence 12291	AL137481	Genbank	6808096
Sequence 12292	AL137542	Genbank	6808221
Sequence 12293	AL137673	Genbank	6807841

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Sequence 12294	AL137714	Genbank	6808128
Sequence 12295	AL137721	Genbank	6808159
Sequence 12296	AL137723	Genbank	6808203
Sequence 12297	AL137818	Genbank	7009598
Sequence 12298	AL157442	Genbank	7018558
Sequence 12299	AL157468	Genbank	7018484
Sequence 12300	AL157493	Genbank	7018539
Sequence 12301	AL158493	Genbank	7161641
Sequence 12302	AL158547	Genbank	7161742
Sequence 12303	AP000008	Genbank	3132318
Sequence 12304	AP000009	Genbank	4666255
Sequence 12305	AP000037	Genbank	3132347
Sequence 12306	AP000038	Genbank	3132348
Sequence 12307	AP000346	Genbank	5103009
Sequence 12308	AP000347	Genbank	5103010
Sequence 12309	AP000473	Genbank	6942329
Sequence 12310	AP000497	Genbank	5926684
Sequence 12311	AP000525	Genbank	5931503
Sequence 12312	AP000547	Genbank	5931525
Sequence 12313	AP000692	Genbank	6693635
Sequence 12314	AP000962	Genbank	6942330
Sequence 12315	AP001063	Genbank	6693613
Sequence 12316	AP001115	Genbank	6899854
Sequence 12317	AP001136	Genbank	6970360
Sequence 12318	AP001137	Genbank	6970361
Sequence 12319	AP001138	Genbank	7262569
Sequence 12320	AP001172	Genbank	6983884
Sequence 12321	AP001343	Genbank	7209831
Sequence 12322	D00596	Genbank	220135
Sequence 12323	D13119	Genbank	285909
Sequence 12324	D13318	Genbank	286026
Sequence 12325	D13634	Genbank	285992
Sequence 12326	D14658	Genbank	285940
Sequence 12327	D14665	Genbank	6630617
Sequence 12328	D14694	Genbank	603801
Sequence 12329	D14696	Genbank	285962
Sequence 12330	D14710	Genbank	559324
Sequence 12331	D16111	Genbank	435637
Sequence 12332	D16947	Genbank	598932
Sequence 12333	D17652	Genbank	409069
Sequence 12334	D23662	Genbank	432362
Sequence 12335	D25274	Genbank	464185
Sequence 12336	D26600	Genbank	565650
Sequence 12337	D29805	Genbank	474986
Sequence 12338	D31885	Genbank	505097
Sequence 12339	D38112	Genbank	644480
Sequence 12340	D38550	Genbank	559708
Sequence 12341	D42052	Genbank	1136740
Sequence 12342	D42063	Genbank	924266
Sequence 12343	D45131	Genbank	1304103
Sequence 12344	D50916	Genbank	1469174
Sequence 12345	D50929	Genbank	1469200
Sequence 12346	D55673	Genbank	870746
Sequence 12347	D63486	Genbank	1469885
Sequence 12348	D78130	Genbank	2443315
Sequence 12349	D79205	Genbank	1754620

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Sequence 12350	D79991	Genbank	1136397
Sequence 12351	D80000	Genbank	1136415
Sequence 12352	D83077	Genbank	1304131
Sequence 12353	D83647	Genbank	1209009
Sequence 12354	D83767	Genbank	1913784
Sequence 12355	D84273	Genbank	3894217
Sequence 12356	D84344	Genbank	2340829
Sequence 12357	D86971	Genbank	1504015
Sequence 12358	D86982	Genbank	1504037
Sequence 12359	D87450	Genbank	1665788
Sequence 12360	D87666	Genbank	1620016
Sequence 12361	D87684	Genbank	1663703
Sequence 12362	D87742	Genbank	1665824
Sequence 12363	E01932	Genbank	2170180
Sequence 12364	E02339	Genbank	2170574
Sequence 12365	E02628	Genbank	2170856
Sequence 12366	E03413	Genbank	2171629
Sequence 12367	E08204	Genbank	2176325
Sequence 12368	E12274	Genbank	3251108
Sequence 12369	E13298	Genbank	3252103
Sequence 12370	E13330	Genbank	3252135
Sequence 12371	E15239	Genbank	5709922
Sequence 12372	J00139	Genbank	182715
Sequence 12373	J01415	Genbank	1944628
Sequence 12374	J02960	Genbank	178203
Sequence 12375	J03537	Genbank	337513
Sequence 12376	J03592	Genbank	339722
Sequence 12377	J03746	Genbank	183655
Sequence 12378	J03779	Genbank	179833
Sequence 12379	J04205	Genbank	178686
Sequence 12380	K00558	Genbank	340020
Sequence 12381	L01057	Genbank	292462
Sequence 12382	L05091	Genbank	388030
Sequence 12383	L05092	Genbank	388031
Sequence 12384	L05628	Genbank	1835658
Sequence 12385	L08125	Genbank	306500
Sequence 12386	L11910	Genbank	292420
Sequence 12387	L12350	Genbank	307505
Sequence 12388	L13806	Genbank	306554
Sequence 12389	L13850	Genbank	292165
Sequence 12390	L14076	Genbank	307437
Sequence 12391	L19185	Genbank	440307
Sequence 12392	L19597	Genbank	306467
Sequence 12393	L20046	Genbank	306741
Sequence 12394	L20941	Genbank	507251
Sequence 12395	L22569	Genbank	348706
Sequence 12396	L25616	Genbank	409465
Sequence 12397	L28809	Genbank	454151
Sequence 12398	L31610	Genbank	1220360
Sequence 12399	L35681	Genbank	532031
Sequence 12400	L38951	Genbank	893287
Sequence 12401	L38995	Genbank	704415
Sequence 12402	L39332	Genbank	1235613
Sequence 12403	L39350	Genbank	1237109
Sequence 12404	L41349	Genbank	762825
Sequence 12405	L43964	Genbank	951202

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Sequence 12406	L47647	Genbank	1000861
Sequence 12407	L76416	Genbank	5566605
Sequence 12408	L76568	Genbank	1905925
Sequence 12409	M11058	Genbank	184243
Sequence 12410	M11167	Genbank	337381
Sequence 12411	M11353	Genbank	184092
Sequence 12412	M13519	Genbank	179461
Sequence 12413	M16342	Genbank	184266
Sequence 12414	M16541	Genbank	1280204
Sequence 12415	M17885	Genbank	190231
Sequence 12416	M17886	Genbank	190233
Sequence 12417	M18930	Genbank	184371
Sequence 12418	M19961	Genbank	180940
Sequence 12419	M20496	Genbank	809235
Sequence 12420	M21142	Genbank	183402
Sequence 12421	M22348	Genbank	190815
Sequence 12422	M22760	Genbank	695359
Sequence 12423	M22919	Genbank	189016
Sequence 12424	M24194	Genbank	187701
Sequence 12425	M24486	Genbank	190785
Sequence 12426	M24543	Genbank	341200
Sequence 12427	M25160	Genbank	189059
Sequence 12428	M26481	Genbank	619789
Sequence 12429	M26663	Genbank	618463
Sequence 12430	M27878	Genbank	1020144
Sequence 12431	M30448	Genbank	181154
Sequence 12432	M31520	Genbank	337504
Sequence 12433	M37583	Genbank	184059
Sequence 12434	M38188	Genbank	189378
Sequence 12435	M58485	Genbank	180154
Sequence 12436	M59907	Genbank	189383
Sequence 12437	M60457	Genbank	181249
Sequence 12438	M63005	Genbank	179981
Sequence 12439	M65209	Genbank	184444
Sequence 12440	M74089	Genbank	182400
Sequence 12441	M74775	Genbank	187151
Sequence 12442	M75883	Genbank	432974
Sequence 12443	M77142	Genbank	339700
Sequence 12444	M77836	Genbank	189497
Sequence 12445	M81601	Genbank	339442
Sequence 12446	M90054	Genbank	337579
Sequence 12447	M93036	Genbank	182904
Sequence 12448	M96982	Genbank	338262
Sequence 12449	S62140	Genbank	386156
Sequence 12450	S63912	Genbank	399757
Sequence 12451	S82300	Genbank	245388
Sequence 12452	U02031	Genbank	451329
Sequence 12453	U07151	Genbank	460624
Sequence 12454	U09813	Genbank	1008454
Sequence 12455	U09954	Genbank	607792
Sequence 12456	U12128	Genbank	557287
Sequence 12457	U13616	Genbank	608024
Sequence 12458	U14193	Genbank	555899
Sequence 12459	U14972	Genbank	550024
Sequence 12460	U16798	Genbank	806751
Sequence 12461	U17899	Genbank	717053

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Sequence 12462	U19145	Genbank	914904
Sequence 12463	U21914	Genbank	736410
Sequence 12464	U24223	Genbank	1215670
Sequence 12465	U24231	Genbank	809486
Sequence 12466	U25165	Genbank	887792
Sequence 12467	U25182	Genbank	799380
Sequence 12468	U25372	Genbank	1045393
Sequence 12469	U31657	Genbank	951331
Sequence 12470	U33886	Genbank	1710107
Sequence 12471	U34683	Genbank	1236349
Sequence 12472	U35246	Genbank	1477465
Sequence 12473	U37143	Genbank	1185451
Sequence 12474	U37230	Genbank	1574941
Sequence 12475	U38784	Genbank	1574947
Sequence 12476	U41371	Genbank	1173904
Sequence 12477	U52111	Genbank	8331754
Sequence 12478	U52427	Genbank	1924973
Sequence 12479	U54562	Genbank	2351381
Sequence 12480	U54993	Genbank	4097314
Sequence 12481	U55184	Genbank	4097327
Sequence 12482	U55853	Genbank	2145094
Sequence 12483	U57847	Genbank	1373420
Sequence 12484	U61167	Genbank	1438934
Sequence 12485	U65896	Genbank	1763689
Sequence 12486	U66469	Genbank	1724072
Sequence 12487	U66871	Genbank	1519518
Sequence 12488	U68105	Genbank	1562509
Sequence 12489	U68758	Genbank	4097815
Sequence 12490	U69570	Genbank	1825473
Sequence 12491	U70063	Genbank	1743866
Sequence 12492	U73379	Genbank	2062372
Sequence 12493	U73824	Genbank	1857236
Sequence 12494	U80017	Genbank	1737211
Sequence 12495	U80763	Genbank	2231366
Sequence 12496	U81375	Genbank	1845344
Sequence 12497	U82695	Genbank	6960456
Sequence 12498	U90909	Genbank	1913889
Sequence 12499	U91322	Genbank	2344876
Sequence 12500	U91328	Genbank	2088550
Sequence 12501	U94586	Genbank	1946691
Sequence 12502	U95689	Genbank	2804669
Sequence 12503	X00351	Genbank	28251
Sequence 12504	X02152	Genbank	34312
Sequence 12505	X03083	Genbank	34309
Sequence 12506	X06409	Genbank	30204
Sequence 12507	X15822	Genbank	30146
Sequence 12508	X16064	Genbank	37495
Sequence 12509	X52839	Genbank	36125
Sequence 12510	X54540	Genbank	37457
Sequence 12511	X60221	Genbank	509290
Sequence 12512	X61123	Genbank	29508
Sequence 12513	X64707	Genbank	29382
Sequence 12514	X65923	Genbank	31302
Sequence 12515	X66401	Genbank	34634
Sequence 12516	X66503	Genbank	415848
Sequence 12517	X67247	Genbank	36149



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Sequence 12518	X68271	Genbank	602341
Sequence 12519	X73114	Genbank	402618
Sequence 12520	X74979	Genbank	400462
Sequence 12521	X75682	Genbank	429094
Sequence 12522	X75861	Genbank	456258
Sequence 12523	X76488	Genbank	434305
Sequence 12524	X80199	Genbank	2385366
Sequence 12525	X81900	Genbank	2274973
Sequence 12526	X84908	Genbank	1502344
Sequence 12527	X98356	Genbank	1648869
Sequence 12528	X99585	Genbank	1770518
Sequence 12529	Y00815	Genbank	34266
Sequence 12530	Y15286	Genbank	2584788
Sequence 12531	Y17448	Genbank	5002578
Sequence 12532	Z13009	Genbank	31072
Sequence 12533	Z14244	Genbank	30150
Sequence 12534	Z48570	Genbank	695580
Sequence 12535	Z56866	Genbank	1028097
Sequence 12536	Z58044	Genbank	1029275
Sequence 12537	Z68277	Genbank	1130689
Sequence 12538	Z69709	Genbank	1204107
Sequence 12539	Z70233	Genbank	1235542
Sequence 12540	Z73417	Genbank	1322397
Sequence 12541	Z82214	Genbank	5911819
Sequence 12542	Z83313	Genbank	1730462
Sequence 12543	Z83843	Genbank	2578095
Sequence 12544	Z83848	Genbank	3164072
Sequence 12545	Z83851	Genbank	5441348
Sequence 12546	Z84466	Genbank	3319673
Sequence 12547	Z84812	Genbank	1845164
Sequence 12548	Z85999	Genbank	2326514
Sequence 12549	Z92544	Genbank	1869775
Sequence 12550	Z95126	Genbank	2342581
Sequence 12551	Z97053	Genbank	9650676
Sequence 12552	Z98749	Genbank	4775611
Sequence 12553	Z98950	Genbank	3036783
Sequence 12554	Z99571	Genbank	2791262
Sequence 12555	AA001709	EST	1445523
Sequence 12556	AA002222	EST	1445157
Sequence 12557	AA004427	EST	1448541
Sequence 12558	AA005278	EST	1448740
Sequence 12559	AA007226	EST	1463200
Sequence 12560	AA010519	EST	1471545
Sequence 12561	AA011539	EST	1472565
Sequence 12562	AA018969	EST	1482361
Sequence 12563	AA020756	EST	1485332
Sequence 12564	AA022472	EST	1486571
Sequence 12565	AA024695	EST	1489608
Sequence 12566	AA025361	EST	1489375
Sequence 12567	AA025400	EST	1491566
Sequence 12568	AA025432	EST	1490914
Sequence 12569	AA026215	EST	1492901
Sequence 12570	AA026422	EST	1492323
Sequence 12571	AA027229	EST	1492149
Sequence 12572	AA028138	EST	1494207
Sequence 12573	AA029944	EST	1496172

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Sequence 12574	AA035377	EST	1507101
Sequence 12575	AA036809	EST	1510048
Sequence 12576	AA039705	EST	1515984
Sequence 12577	AA039716	EST	1515995
Sequence 12578	AA040270	EST	1516675
Sequence 12579	AA040302	EST	1516747
Sequence 12580	AA040863	EST	1517159
Sequence 12581	AA044237	EST	1522113
Sequence 12582	AA044842	EST	1523064
Sequence 12583	AA045223	EST	1523629
Sequence 12584	AA045780	EST	1525739
Sequence 12585	AA046883	EST	1524818
Sequence 12586	AA046936	EST	1524835
Sequence 12587	AA047046	EST	1524944
Sequence 12588	AA047224	EST	1525124
Sequence 12589	AA047729	EST	1527526
Sequence 12590	AA053607	EST	1544534
Sequence 12591	AA054470	EST	1545395
Sequence 12592	AA055504	EST	1547843
Sequence 12593	AA055943	EST	1548282
Sequence 12594	AA057400	EST	1550105
Sequence 12595	AA059199	EST	1552077
Sequence 12596	AA069597	EST	1576956
Sequence 12597	AA074189	EST	1614057
Sequence 12598	AA074611	EST	1614677
Sequence 12599	AA074614	EST	1614492
Sequence 12600	AA075494	EST	1615364
Sequence 12601	AA079690	EST	1618711
Sequence 12602	AA081037	EST	1622972
Sequence 12603	AA082177	EST	1624236
Sequence 12604	AA082640	EST	1624905
Sequence 12605	AA083420	EST	1625481
Sequence 12606	AA084868	EST	1626988
Sequence 12607	AA085763	EST	1629225
Sequence 12608	AA085810	EST	1629342
Sequence 12609	AA088187	EST	1633745
Sequence 12610	AA088758	EST	1634279
Sequence 12611	AA088843	EST	1634355
Sequence 12612	AA091442	EST	1636897
Sequence 12613	AA092589	EST	1637410
Sequence 12614	AA093037	EST	1638242
Sequence 12615	AA093542	EST	1639127
Sequence 12616	AA094831	EST	1640416
Sequence 12617	AA094888	EST	1640465
Sequence 12618	AA095725	EST	1641310
Sequence 12619	AA113354	EST	1665194
Sequence 12620	AA115636	EST	1670771
Sequence 12621	AA120954	EST	1678359
Sequence 12622	AA121266	EST	1678899
Sequence 12623	AA126086	EST	1685760
Sequence 12624	AA127483	EST	1686755
Sequence 12625	AA127687	EST	1687021
Sequence 12626	AA127718	EST	1687007
Sequence 12627	AA128745	EST	1688653
Sequence 12628	AA132163	EST	1693672
Sequence 12629	AA133361	EST	1690329

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Sequence 12630	AA134275	EST	1691754
Sequence 12631	AA135477	EST	1696553
Sequence 12632	AA135809	EST	1696820
Sequence 12633	AA136084	EST	1697294
Sequence 12634	AA136337	EST	1697545
Sequence 12635	AA147775	EST	1717155
Sequence 12636	AA150361	EST	1721873
Sequence 12637	AA150556	EST	1722069
Sequence 12638	AA151565	EST	1720183
Sequence 12639	AA152225	EST	1721426
Sequence 12640	AA156901	EST	1728581
Sequence 12641	AA166664	EST	1745119
Sequence 12642	AA166955	EST	1745331
Sequence 12643	AA167011	EST	1745386
Sequence 12644	AA167399	EST	1745846
Sequence 12645	AA169486	EST	1748200
Sequence 12646	AA172003	EST	1751060
Sequence 12647	AA173437	EST	1753566
Sequence 12648	AA173705	EST	1753883
Sequence 12649	AA174161	EST	1754441
Sequence 12650	AA177042	EST	1758180
Sequence 12651	AA178986	EST	1760538
Sequence 12652	AA179059	EST	1760471
Sequence 12653	AA179250	EST	1760619
Sequence 12654	AA179888	EST	1761212
Sequence 12655	AA180349	EST	1761631
Sequence 12656	AA181138	EST	1764605
Sequence 12657	AA182751	EST	1766581
Sequence 12658	AA186328	EST	1774446
Sequence 12659	AA187076	EST	1775245
Sequence 12660	AA189093	EST	1776127
Sequence 12661	AA191365	EST	1780231
Sequence 12662	AA191629	EST	1780293
Sequence 12663	AA192253	EST	1782078
Sequence 12664	AA193193	EST	1782646
Sequence 12665	AA195119	EST	1784830
Sequence 12666	AA203650	EST	1799369
Sequence 12667	AA203671	EST	1799390
Sequence 12668	AA206446	EST	1801826
Sequence 12669	AA206761	EST	1802148
Sequence 12670	AA215640	EST	1815385
Sequence 12671	AA216102	EST	1816057
Sequence 12672	AA216292	EST	1816271
Sequence 12673	AA216350	EST	1816315
Sequence 12674	AA223194	EST	1843737
Sequence 12675	AA224460	EST	1845078
Sequence 12676	AA226801	EST	1848430
Sequence 12677	AA232991	EST	1856115
Sequence 12678	AA233294	EST	1856287
Sequence 12679	AA233487	EST	1856517
Sequence 12680	AA233674	EST	1856667
Sequence 12681	AA236252	EST	1858329
Sequence 12682	AA242860	EST	1873678
Sequence 12683	AA243369	EST	1874162
Sequence 12684	AA243646	EST	1874456
Sequence 12685	AA248173	EST	1878762

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Sequence 12686	AA251702	EST	1886665
Sequence 12687	AA252745	EST	1887715
Sequence 12688	AA255738	EST	1892676
Sequence 12689	AA256348	EST	1891933
Sequence 12690	AA258029	EST	1894479
Sequence 12691	AA258243	EST	1894238
Sequence 12692	AA280080	EST	1921554
Sequence 12693	AA280848	EST	1923546
Sequence 12694	AA281553	EST	1924231
Sequence 12695	AA283976	EST	1928258
Sequence 12696	AA284242	EST	1928542
Sequence 12697	AA285040	EST	1927721
Sequence 12698	AA285126	EST	1928107
Sequence 12699	AA287500	EST	1933225
Sequence 12700	AA287921	EST	1933744
Sequence 12701	AA287941	EST	1933764
Sequence 12702	AA291316	EST	1939294
Sequence 12703	AA292003	EST	1939980
Sequence 12704	AA292069	EST	1940055
Sequence 12705	AA293612	EST	1941263
Sequence 12706	AA295997	EST	1948334
Sequence 12707	AA298183	EST	1950600
Sequence 12708	AA299920	EST	1952324
Sequence 12709	AA303377	EST	1955711
Sequence 12710	AA307371	EST	1959720
Sequence 12711	AA307611	EST	1959960
Sequence 12712	AA311453	EST	1963779
Sequence 12713	AA312681	EST	1965030
Sequence 12714	AA313693	EST	1966022
Sequence 12715	AA314391	EST	1966740
Sequence 12716	AA316545	EST	1968873
Sequence 12717	AA316727	EST	1969286
Sequence 12718	AA316742	EST	1969141
Sequence 12719	AA316868	EST	1969196
Sequence 12720	AA317660	EST	1969986
Sequence 12721	AA318533	EST	1970882
Sequence 12722	AA318684	EST	1971012
Sequence 12723	AA319233	EST	1971558
Sequence 12724	AA319855	EST	1972181
Sequence 12725	AA327986	EST	1980229
Sequence 12726	AA328203	EST	1980603
Sequence 12727	AA345360	EST	1997595
Sequence 12728	AA346874	EST	1999111
Sequence 12729	AA347532	EST	1999862
Sequence 12730	AA364154	EST	2016503
Sequence 12731	AA364506	EST	2016845
Sequence 12732	AA370825	EST	2023163
Sequence 12733	AA373288	EST	2025893
Sequence 12734	AA380652	EST	2032972
Sequence 12735	AA383018	EST	2035335
Sequence 12736	AA393236	EST	2046205
Sequence 12737	AA393310	EST	2046278
Sequence 12738	AA393525	EST	2046493
Sequence 12739	AA393906	EST	2047017
Sequence 12740	AA398315	EST	2051620
Sequence 12741	AA398413	EST	2051522

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Sequence 12742	AA398612	EST	2051721
Sequence 12743	AA400644	EST	2054515
Sequence 12744	AA401361	EST	2053569
Sequence 12745	AA402539	EST	2056345
Sequence 12746	AA402743	EST	2057061
Sequence 12747	AA402800	EST	2056553
Sequence 12748	AA405045	EST	2063467
Sequence 12749	AA405814	EST	2063797
Sequence 12750	AA406310	EST	2064294
Sequence 12751	AA410936	EST	2070190
Sequence 12752	AA417743	EST	2079544
Sequence 12753	AA418533	EST	2080314
Sequence 12754	AA421297	EST	2100139
Sequence 12755	AA427471	EST	2111333
Sequence 12756	AA427574	EST	2112002
Sequence 12757	AA428516	EST	2112513
Sequence 12758	AA430552	EST	2111127
Sequence 12759	AA432282	EST	2114670
Sequence 12760	AA434140	EST	2139054
Sequence 12761	AA434447	EST	2139361
Sequence 12762	AA435671	EST	2140585
Sequence 12763	AA442377	EST	2154255
Sequence 12764	AA442786	EST	2155461
Sequence 12765	AA442878	EST	2155553
Sequence 12766	AA447199	EST	2159864
Sequence 12767	AA448292	EST	2161962
Sequence 12768	AA448409	EST	2162079
Sequence 12769	AA453183	EST	2166852
Sequence 12770	AA453411	EST	2167080
Sequence 12771	AA453747	EST	2167416
Sequence 12772	AA454187	EST	2167856
Sequence 12773	AA456524	EST	2179100
Sequence 12774	AA458612	EST	2183519
Sequence 12775	AA459528	EST	2184435
Sequence 12776	AA460187	EST	2185003
Sequence 12777	AA460266	EST	2185082
Sequence 12778	AA463256	EST	2188140
Sequence 12779	AA463899	EST	2188783
Sequence 12780	AA465606	EST	2191773
Sequence 12781	AA467764	EST	2194298
Sequence 12782	AA468230	EST	2194764
Sequence 12783	AA468757	EST	2195291
Sequence 12784	AA470337	EST	2197646
Sequence 12785	AA477608	EST	2206242
Sequence 12786	AA478103	EST	2206737
Sequence 12787	AA478663	EST	2207297
Sequence 12788	AA478669	EST	2207303
Sequence 12789	AA480081	EST	2208232
Sequence 12790	AA483251	EST	2212064
Sequence 12791	AA483698	EST	2212511
Sequence 12792	AA486416	EST	2216580
Sequence 12793	AA491100	EST	2220273
Sequence 12794	AA491505	EST	2218288
Sequence 12795	AA493382	EST	2223223
Sequence 12796	AA493522	EST	2223363
Sequence 12797	AA494118	EST	2223959

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Sequence 12798	AA494433	EST	2224220
Sequence 12799	AA496993	EST	2230314
Sequence 12800	AA501429	EST	2236396
Sequence 12801	AA503827	EST	2238794
Sequence 12802	AA505115	EST	2241275
Sequence 12803	AA507605	EST	2244044
Sequence 12804	AA507791	EST	2244230
Sequence 12805	AA513367	EST	2251779
Sequence 12806	AA513447	EST	2251859
Sequence 12807	AA514215	EST	2253883
Sequence 12808	AA514331	EST	2253839
Sequence 12809	AA514555	EST	2254155
Sequence 12810	AA514835	EST	2254435
Sequence 12811	AA514972	EST	2254572
Sequence 12812	AA515971	EST	2255571
Sequence 12813	AA521142	EST	2261685
Sequence 12814	AA522471	EST	2263183
Sequence 12815	AA523897	EST	2264825
Sequence 12816	AA524190	EST	2265118
Sequence 12817	AA525960	EST	2268029
Sequence 12818	AA526064	EST	2268133
Sequence 12819	AA526186	EST	2268255
Sequence 12820	AA526891	EST	2268960
Sequence 12821	AA526943	EST	2269012
Sequence 12822	AA527040	EST	2269109
Sequence 12823	AA528775	EST	2270844
Sequence 12824	AA531540	EST	2274246
Sequence 12825	AA533286	EST	2277382
Sequence 12826	AA533355	EST	2277451
Sequence 12827	AA534137	EST	2278153
Sequence 12828	AA535571	EST	2279824
Sequence 12829	AA541666	EST	2288100
Sequence 12830	AA541813	EST	2288247
Sequence 12831	AA548722	EST	2319004
Sequence 12832	AA551733	EST	2321985
Sequence 12833	AA552169	EST	2322421
Sequence 12834	AA554726	EST	2325265
Sequence 12835	AA555194	EST	2325733
Sequence 12836	AA557191	EST	2327668
Sequence 12837	AA563905	EST	2335544
Sequence 12838	AA564118	EST	2335757
Sequence 12839	AA565885	EST	2337524
Sequence 12840	AA568360	EST	2341414
Sequence 12841	AA568578	EST	2341632
Sequence 12842	AA570171	EST	2344151
Sequence 12843	AA577170	EST	2354644
Sequence 12844	AA577927	EST	2356111
Sequence 12845	AA579876	EST	2355203
Sequence 12846	AA580408	EST	2355735
Sequence 12847	AA582370	EST	2359730
Sequence 12848	AA583169	EST	2367778
Sequence 12849	AA586921	EST	2397735
Sequence 12850	AA587325	EST	2398139
Sequence 12851	AA588161	EST	2402336
Sequence 12852	AA588541	EST	2401716
Sequence 12853	AA595339	EST	2410689

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Sequence 12854	AA599217	EST	2432842
Sequence 12855	AA602418	EST	2435914
Sequence 12856	AA604553	EST	2445417
Sequence 12857	AA608603	EST	2457031
Sequence 12858	AA608917	EST	2457345
Sequence 12859	AA608990	EST	2457418
Sequence 12860	AA610801	EST	2459229
Sequence 12861	AA613587	EST	2464625
Sequence 12862	AA613637	EST	2464675
Sequence 12863	AA614729	EST	2466925
Sequence 12864	AA626535	EST	2538922
Sequence 12865	AA627229	EST	2540273
Sequence 12866	AA627804	EST	2539899
Sequence 12867	AA627996	EST	2539995
Sequence 12868	AA631218	EST	2553829
Sequence 12869	AA631224	EST	2553835
Sequence 12870	AA631404	EST	2554015
Sequence 12871	AA631684	EST	2554295
Sequence 12872	AA632005	EST	2555419
Sequence 12873	AA632225	EST	2555639
Sequence 12874	AA632328	EST	2555742
Sequence 12875	AA633317	EST	2556731
Sequence 12876	AA633888	EST	2557102
Sequence 12877	AA634120	EST	2557334
Sequence 12878	AA634360	EST	2557574
Sequence 12879	AA635630	EST	2559472
Sequence 12880	AA636029	EST	2559871
Sequence 12881	AA639730	EST	2563509
Sequence 12882	AA640721	EST	2565971
Sequence 12883	AA640779	EST	2566029
Sequence 12884	AA642858	EST	2568076
Sequence 12885	AA643157	EST	2568375
Sequence 12886	AA643611	EST	2568829
Sequence 12887	AA643763	EST	2568981
Sequence 12888	AA649327	EST	2575756
Sequence 12889	AA653201	EST	2589372
Sequence 12890	AA655033	EST	2591187
Sequence 12891	AA657408	EST	2593562
Sequence 12892	AA659388	EST	2595542
Sequence 12893	AA662764	EST	2616755
Sequence 12894	AA669846	EST	2631345
Sequence 12895	AA669862	EST	2631361
Sequence 12896	AA678121	EST	2658643
Sequence 12897	AA678246	EST	2658768
Sequence 12898	AA678311	EST	2658833
Sequence 12899	AA678696	EST	2659218
Sequence 12900	AA682980	EST	2668871
Sequence 12901	AA683334	EST	2669225
Sequence 12902	AA687631	EST	2674537
Sequence 12903	AA688365	EST	2675271
Sequence 12904	AA694202	EST	2695140
Sequence 12905	AA699532	EST	2702655
Sequence 12906	AA699712	EST	2702675
Sequence 12907	AA700166	EST	2703129
Sequence 12908	AA701936	EST	2705049
Sequence 12909	AA702410	EST	2705523

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Sequence 12910	AA702881	EST	2705994
Sequence 12911	AA704096	EST	2714014
Sequence 12912	AA705746	EST	2715664
Sequence 12913	AA707188	EST	2717106
Sequence 12914	AA708421	EST	2718339
Sequence 12915	AA714951	EST	2727225
Sequence 12916	AA723194	EST	2740971
Sequence 12917	AA731317	EST	2752521
Sequence 12918	AA731688	EST	2752577
Sequence 12919	AA736880	EST	2768114
Sequence 12920	AA748046	EST	2788004
Sequence 12921	AA749025	EST	2788983
Sequence 12922	AA764734	EST	2815972
Sequence 12923	AA769434	EST	2820672
Sequence 12924	AA770613	EST	2821851
Sequence 12925	AA772280	EST	2824063
Sequence 12926	AA773040	EST	2824611
Sequence 12927	AA775624	EST	2834958
Sequence 12928	AA775824	EST	2835158
Sequence 12929	AA777499	EST	2836978
Sequence 12930	AA778560	EST	2837891
Sequence 12931	AA778776	EST	2838107
Sequence 12932	AA788754	EST	2848874
Sequence 12933	AA806729	EST	2875479
Sequence 12934	AA806878	EST	2876454
Sequence 12935	AA808206	EST	2877612
Sequence 12936	AA809267	EST	2878673
Sequence 12937	AA809700	EST	2879106
Sequence 12938	AA809964	EST	2879370
Sequence 12939	AA810073	EST	2879479
Sequence 12940	AA811224	EST	2880835
Sequence 12941	AA811879	EST	2881490
Sequence 12942	AA813197	EST	2883182
Sequence 12943	AA814246	EST	2883842
Sequence 12944	AA814643	EST	2884239
Sequence 12945	AA825680	EST	2898992
Sequence 12946	AA828003	EST	2900366
Sequence 12947	AA828330	EST	2901429
Sequence 12948	AA829737	EST	2902836
Sequence 12949	AA831926	EST	2905025
Sequence 12950	AA831948	EST	2905047
Sequence 12951	AA832521	EST	2898667
Sequence 12952	AA836590	EST	2910909
Sequence 12953	AA837128	EST	2912327
Sequence 12954	AA843115	EST	2929633
Sequence 12955	AA843807	EST	2930258
Sequence 12956	AA846016	EST	2932156
Sequence 12957	AA846735	EST	2932875
Sequence 12958	AA854511	EST	2942049
Sequence 12959	AA861279	EST	2953419
Sequence 12960	AA863230	EST	2955709
Sequence 12961	AA863377	EST	2955856
Sequence 12962	AA865569	EST	2957845
Sequence 12963	AA872000	EST	2968038
Sequence 12964	AA873173	EST	2969295
Sequence 12965	AA873489	EST	2969611



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Sequence 12966	AA876033	EST	2984796
Sequence 12967	AA877009	EST	2986086
Sequence 12968	AA877239	EST	2986316
Sequence 12969	AA877769	EST	2986734
Sequence 12970	AA883195	EST	2994671
Sequence 12971	AA884623	EST	2994153
Sequence 12972	AA885297	EST	2994374
Sequence 12973	AA886074	EST	3001182
Sequence 12974	AA890342	EST	3017221
Sequence 12975	AA894745	EST	3031146
Sequence 12976	AA902974	EST	3038097
Sequence 12977	AA903301	EST	3038424
Sequence 12978	AA910691	EST	3049981
Sequence 12979	AA910881	EST	3050171
Sequence 12980	AA917382	EST	3057272
Sequence 12981	AA931246	EST	3085632
Sequence 12982	AA931567	EST	3085953
Sequence 12983	AA933730	EST	3089998
Sequence 12984	AA935696	EST	3092853
Sequence 12985	AA937407	EST	3095518
Sequence 12986	AA946596	EST	3109991
Sequence 12987	AA947190	EST	3110585
Sequence 12988	AA948676	EST	3109929
Sequence 12989	AA954463	EST	3118158
Sequence 12990	AA969495	EST	3144675
Sequence 12991	AA969966	EST	3145479
Sequence 12992	AA972733	EST	3147913
Sequence 12993	AA973170	EST	3148350
Sequence 12994	AA983457	EST	3161982
Sequence 12995	AA987257	EST	3172621
Sequence 12996	AA988988	EST	3174559
Sequence 12997	AA992853	EST	3179398
Sequence 12998	AA992960	EST	3179505
Sequence 12999	AA995518	EST	3182007
Sequence 13000	AI003314	EST	3203728
Sequence 13001	AI005654	EST	3215164
Sequence 13002	AI016909	EST	3231245
Sequence 13003	AI018676	EST	3232474
Sequence 13004	AI025856	EST	3241469
Sequence 13005	AI032664	EST	3253790
Sequence 13006	AI034460	EST	3255413
Sequence 13007	AI039964	EST	3279158
Sequence 13008	AI040839	EST	3280033
Sequence 13009	AI041671	EST	3280865
Sequence 13010	AI041813	EST	3281007
Sequence 13011	AI052135	EST	3308126
Sequence 13012	AI052256	EST	3308247
Sequence 13013	AI052761	EST	3308752
Sequence 13014	AI053744	EST	3321531
Sequence 13015	AI057607	EST	3331473
Sequence 13016	AI061586	EST	6358883
Sequence 13017	AI061642	EST	6358939
Sequence 13018	AI064691	EST	6358963
Sequence 13019	AI064781	EST	6359053
Sequence 13020	AI074143	EST	3400787
Sequence 13021	AI074253	EST	3400897

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Sequence 13022	AI074350	EST	3400994
Sequence 13023	AI075208	EST	3401799
Sequence 13024	AI076009	EST	3405187
Sequence 13025	AI076793	EST	3405971
Sequence 13026	AI079885	EST	3416136
Sequence 13027	AI080676	EST	3416927
Sequence 13028	AI081536	EST	3418328
Sequence 13029	AI086009	EST	3424432
Sequence 13030	AI086963	EST	3425386
Sequence 13031	AI087104	EST	3425527
Sequence 13032	AI091297	EST	3430356
Sequence 13033	AI091340	EST	3430399
Sequence 13034	AI096751	EST	3445859
Sequence 13035	AI114651	EST	6359996
Sequence 13036	AI123912	EST	3539678
Sequence 13037	AI126019	EST	3594533
Sequence 13038	AI127959	EST	3596473
Sequence 13039	AI133330	EST	6360646
Sequence 13040	AI139392	EST	3645364
Sequence 13041	AI143894	EST	3665703
Sequence 13042	AI144216	EST	3666025
Sequence 13043	AI146737	EST	3674419
Sequence 13044	AI148343	EST	3676025
Sequence 13045	AI159872	EST	3693252
Sequence 13046	AI160110	EST	3693490
Sequence 13047	AI168423	EST	3701593
Sequence 13048	AI183462	EST	3734100
Sequence 13049	AI184770	EST	3735408
Sequence 13050	AI186840	EST	3737478
Sequence 13051	AI187815	EST	3739024
Sequence 13052	AI189478	EST	3740687
Sequence 13053	AI191342	EST	3742551
Sequence 13054	AI198812	EST	3751418
Sequence 13055	AI198882	EST	3751488
Sequence 13056	AI202429	EST	3755035
Sequence 13057	AI202937	EST	3755543
Sequence 13058	AI207682	EST	6361696
Sequence 13059	AI216387	EST	3785428
Sequence 13060	AI221087	EST	3803290
Sequence 13061	AI240307	EST	3835704
Sequence 13062	AI240817	EST	3836214
Sequence 13063	AI242075	EST	3837472
Sequence 13064	AI244187	EST	3839584
Sequence 13065	AI246248	EST	3841645
Sequence 13066	AI247411	EST	3842808
Sequence 13067	AI248525	EST	3843922
Sequence 13068	AI249008	EST	3844405
Sequence 13069	AI251793	EST	3848322
Sequence 13070	AI253046	EST	3849575
Sequence 13071	AI253330	EST	3850451
Sequence 13072	AI253436	EST	3850391
Sequence 13073	AI262640	EST	3870843
Sequence 13074	AI267506	EST	3886673
Sequence 13075	AI267570	EST	3886737
Sequence 13076	AI268542	EST	3887709
Sequence 13077	AI269205	EST	3888372

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Sequence 13078	AI275967	EST	3898241
Sequence 13079	AI275998	EST	3898272
Sequence 13080	AI276110	EST	3898384
Sequence 13081	AI278317	EST	3900585
Sequence 13082	AI278766	EST	3917000
Sequence 13083	AI278998	EST	3917232
Sequence 13084	AI280044	EST	3918277
Sequence 13085	AI280747	EST	3918980
Sequence 13086	AI281464	EST	3919697
Sequence 13087	AI282246	EST	3920479
Sequence 13088	AI282254	EST	3920487
Sequence 13089	AI285371	EST	3923604
Sequence 13090	AI288305	EST	3930985
Sequence 13091	AI289108	EST	3932372
Sequence 13092	AI290733	EST	3933507
Sequence 13093	AI291613	EST	3934387
Sequence 13094	AI291918	EST	3934692
Sequence 13095	AI302808	EST	3962154
Sequence 13096	AI309128	EST	4003999
Sequence 13097	AI335458	EST	4072385
Sequence 13098	AI337195	EST	4074122
Sequence 13099	AI339940	EST	4076867
Sequence 13100	AI341735	EST	4078662
Sequence 13101	AI342244	EST	4079171
Sequence 13102	AI344445	EST	4081651
Sequence 13103	AI345345	EST	4082551
Sequence 13104	AI345677	EST	4082883
Sequence 13105	AI356050	EST	4107671
Sequence 13106	AI361513	EST	4113134
Sequence 13107	AI370743	EST	4149496
Sequence 13108	AI380670	EST	4190523
Sequence 13109	AI381627	EST	4194408
Sequence 13110	AI384017	EST	4196798
Sequence 13111	AI400359	EST	4243446
Sequence 13112	AI420311	EST	4266242
Sequence 13113	AI421401	EST	4267332
Sequence 13114	AI435207	EST	4301566
Sequence 13115	AI446753	EST	4297414
Sequence 13116	AI458730	EST	4311309
Sequence 13117	AI458971	EST	4311550
Sequence 13118	AI459103	EST	4311682
Sequence 13119	AI459338	EST	4311917
Sequence 13120	AI468004	EST	4330094
Sequence 13121	AI469505	EST	4331595
Sequence 13122	AI479751	EST	4372919
Sequence 13123	AI480118	EST	4373286
Sequence 13124	AI492144	EST	4393147
Sequence 13125	AI497917	EST	4389899
Sequence 13126	AI499678	EST	4391660
Sequence 13127	AI500313	EST	4392295
Sequence 13128	AI554818	EST	4487181
Sequence 13129	AI559531	EST	4509736
Sequence 13130	AI560688	EST	4511029
Sequence 13131	AI566007	EST	4524459
Sequence 13132	AI567612	EST	4526064
Sequence 13133	AI568146	EST	4526720

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Sequence 13134	AI568614	EST	4531988
Sequence 13135	AI572600	EST	4535974
Sequence 13136	AI581048	EST	4565424
Sequence 13137	AI582231	EST	4568128
Sequence 13138	AI588871	EST	4597919
Sequence 13139	AI597782	EST	4606830
Sequence 13140	AI610953	EST	4620120
Sequence 13141	AI611995	EST	4621162
Sequence 13142	AI619754	EST	4628880
Sequence 13143	AI627855	EST	4664655
Sequence 13144	AI631608	EST	4682938
Sequence 13145	AI631996	EST	4683326
Sequence 13146	AI632109	EST	4683439
Sequence 13147	AI632955	EST	4684285
Sequence 13148	AI636794	EST	4688124
Sequence 13149	AI653101	EST	4737080
Sequence 13150	AI653441	EST	4737420
Sequence 13151	AI655644	EST	4739623
Sequence 13152	AI659251	EST	4762821
Sequence 13153	AI659386	EST	4762956
Sequence 13154	AI669708	EST	4834482
Sequence 13155	AI678630	EST	4888812
Sequence 13156	AI681539	EST	4891721
Sequence 13157	AI683912	EST	4894094
Sequence 13158	AI684760	EST	4896054
Sequence 13159	AI685829	EST	4897123
Sequence 13160	AI688152	EST	4899446
Sequence 13161	AI688730	EST	4900024
Sequence 13162	AI690281	EST	4901575
Sequence 13163	AI692476	EST	4969816
Sequence 13164	AI692763	EST	4970103
Sequence 13165	AI694509	EST	4971849
Sequence 13166	AI695805	EST	4983705
Sequence 13167	AI703457	EST	4991357
Sequence 13168	AI741323	EST	5109611
Sequence 13169	AI743098	EST	5111386
Sequence 13170	AI744238	EST	5112526
Sequence 13171	AI744256	EST	5112544
Sequence 13172	AI744984	EST	5113272
Sequence 13173	AI749216	EST	5127480
Sequence 13174	AI752250	EST	5130514
Sequence 13175	AI753825	EST	5132177
Sequence 13176	AI760744	EST	5176411
Sequence 13177	AI762877	EST	5178544
Sequence 13178	AI766072	EST	5232581
Sequence 13179	AI769461	EST	5235970
Sequence 13180	AI792057	EST	5339773
Sequence 13181	AI796688	EST	5362151
Sequence 13182	AI802907	EST	5368368
Sequence 13183	AI803019	EST	5368491
Sequence 13184	AI803566	EST	5369026
Sequence 13185	AI806628	EST	5393194
Sequence 13186	AI811625	EST	5398191
Sequence 13187	AI815404	EST	5430950
Sequence 13188	AI815499	EST	5431045
Sequence 13189	AI816161	EST	5431707

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Sequence 13190	AI819909	EST	5438988
Sequence 13191	AI824193	EST	5444864
Sequence 13192	AI826628	EST	5447299
Sequence 13193	AI859220	EST	5512836
Sequence 13194	AI863349	EST	5527456
Sequence 13195	AI866561	EST	5530668
Sequence 13196	AI868330	EST	5541346
Sequence 13197	AI872857	EST	5546906
Sequence 13198	AI889718	EST	5594882
Sequence 13199	AI905192	EST	6495579
Sequence 13200	AI912093	EST	5631948
Sequence 13201	AI921575	EST	5657539
Sequence 13202	AI922278	EST	5658242
Sequence 13203	AI925156	EST	5661120
Sequence 13204	AI928710	EST	5664674
Sequence 13205	AI932970	EST	5671707
Sequence 13206	AI939359	EST	5678229
Sequence 13207	AI951970	EST	5744280
Sequence 13208	AI952576	EST	5744886
Sequence 13209	AI954275	EST	5746585
Sequence 13210	AI962421	EST	5755134
Sequence 13211	AI962746	EST	5755459
Sequence 13212	AI968255	EST	5765073
Sequence 13213	AI970812	EST	5767638
Sequence 13214	AI991063	EST	5837966
Sequence 13215	AI992283	EST	5839188
Sequence 13216	AL036115	EST	5927646
Sequence 13217	AL036349	EST	5405930
Sequence 13218	AL036413	EST	5405969
Sequence 13219	AL037368	EST	5406772
Sequence 13220	AL038505	EST	5928459
Sequence 13221	AL040528	EST	5935315
Sequence 13222	AL040985	EST	5409929
Sequence 13223	AL042384	EST	5421723
Sequence 13224	AL044640	EST	5432855
Sequence 13225	AL048351	EST	5936451
Sequence 13226	AL134733	EST	6602920
Sequence 13227	AL157600	EST	7058001
Sequence 13228	AW004978	EST	5853682
Sequence 13229	AW014893	EST	5863650
Sequence 13230	AW020158	EST	5873698
Sequence 13231	AW027717	EST	5886473
Sequence 13232	AW051707	EST	5913989
Sequence 13233	AW069100	EST	6024098
Sequence 13234	AW069166	EST	6024252
Sequence 13235	AW069188	EST	6024274
Sequence 13236	AW070930	EST	6025928
Sequence 13237	AW083185	EST	6038337
Sequence 13238	AW084353	EST	6039505
Sequence 13239	AW086188	EST	6041262
Sequence 13240	AW088595	EST	6044412
Sequence 13241	AW089333	EST	6046677
Sequence 13242	AW118097	EST	6086681
Sequence 13243	AW136562	EST	6140695
Sequence 13244	AW148690	EST	6196586
Sequence 13245	AW151847	EST	6199832

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Sequence 13246	AW166819	EST	6398344
Sequence 13247	AW167129	EST	6398654
Sequence 13248	AW168050	EST	6399575
Sequence 13249	AW178252	EST	6444289
Sequence 13250	AW188275	EST	6462711
Sequence 13251	AW188668	EST	6463028
Sequence 13252	AW190301	EST	6464781
Sequence 13253	AW192683	EST	6471382
Sequence 13254	AW194025	EST	6472756
Sequence 13255	AW194497	EST	6473323
Sequence 13256	AW195584	EST	6474734
Sequence 13257	AW196723	EST	6475953
Sequence 13258	AW204679	EST	6504151
Sequence 13259	AW207172	EST	6506668
Sequence 13260	AW243325	EST	6577165
Sequence 13261	AW263682	EST	6640498
Sequence 13262	AW290969	EST	6697605
Sequence 13263	AW292970	EST	6699606
Sequence 13264	AW295194	EST	6701830
Sequence 13265	AW297219	EST	6703855
Sequence 13266	AW301845	EST	6711522
Sequence 13267	AW302764	EST	6712444
Sequence 13268	AW364986	EST	6869636
Sequence 13269	AW365134	EST	6869784
Sequence 13270	AW391931	EST	6896590
Sequence 13271	AW402563	EST	6921261
Sequence 13272	AW405635	EST	6924692
Sequence 13273	AW410936	EST	6936477
Sequence 13274	AW411275	EST	6936816
Sequence 13275	AW444608	EST	6986370
Sequence 13276	AW451259	EST	6992035
Sequence 13277	AW474887	EST	7044993
Sequence 13278	AW578558	EST	7253607
Sequence 13279	F29317	EST	4814943
Sequence 13280	F34866	EST	4820492
Sequence 13281	F36899	EST	4822525
Sequence 13282	H17774	EST	884014
Sequence 13283	H54240	EST	994387
Sequence 13284	H56010	EST	1004654
Sequence 13285	H71857	EST	1043673
Sequence 13286	H78871	EST	1056960
Sequence 13287	H97996	EST	1118881
Sequence 13288	N20525	EST	1125480
Sequence 13289	N27572	EST	1142053
Sequence 13290	N48918	EST	1190084
Sequence 13291	N62491	EST	1210320
Sequence 13292	N95724	EST	1268009
Sequence 13293	R02774	EST	752510
Sequence 13294	R06525	EST	757145
Sequence 13295	R14391	EST	767467
Sequence 13296	R55374	EST	824669
Sequence 13297	T08334	EST	389362
Sequence 13298	T24823	EST	534448
Sequence 13299	T60891	EST	663928
Sequence 13300	T82957	EST	711245
Sequence 13301	T83814	EST	712102

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Sequence 13302	W01580	EST	1273634
Sequence 13303	W04263	EST	1276162
Sequence 13304	W19343	EST	1295012
Sequence 13305	W23474	EST	1300308
Sequence 13306	W69300	EST	1378561
Sequence 13307	W86630	EST	1400227
Sequence 13308	V21239	NUCPATENT	N/A
Sequence 13309	V34331	NUCPATENT	N/A
Sequence 13310	V43615	NUCPATENT	N/A
Sequence 13311	V84583	NUCPATENT	N/A
Sequence 13312	X03841	NUCPATENT	N/A
Sequence 13313	X30393	NUCPATENT	N/A
Sequence 13314	X40045	NUCPATENT	N/A
Sequence 13315	X84983	NUCPATENT	1488593
Sequence 13316	X97975	NUCPATENT	1340080
Sequence 13317	X98010	NUCPATENT	1360094
Sequence 13318	Z14718	NUCPATENT	6383
Sequence 13319	Z40810	NUCPATENT	566550
Sequence 13320	Z41320	NUCPATENT	567459
Sequence 13321	Z41384	NUCPATENT	567528
Sequence 13322	AC02716	PREPATNUC	N/A
Sequence 13323	AC36924	PREPATNUC	N/A
Sequence 13324	AC36925	PREPATNUC	N/A
Sequence 13325	AC36946	PREPATNUC	N/A
Sequence 13326	AC37777	PREPATNUC	N/A
Sequence 13327	AC38546	PREPATNUC	N/A
Sequence 13328	AC39510	PREPATNUC	N/A
Sequence 13329	A02759	Genbank	345130
Sequence 13330	A06846	Genbank	490055
Sequence 13331	A14133	Genbank	490127
Sequence 13332	A16794	Genbank	512417
Sequence 13333	A16796	Genbank	579569
Sequence 13334	A61385	Genbank	3715797
Sequence 13335	AB000584	Genbank	1813326
Sequence 13336	AB001535	Genbank	3928755
Sequence 13337	AB002303	Genbank	2224550
Sequence 13338	AB002308	Genbank	6634012
Sequence 13339	AB002322	Genbank	6634014
Sequence 13340	AB002323	Genbank	2224590
Sequence 13341	AB002360	Genbank	2224664
Sequence 13342	AB002363	Genbank	2224670
Sequence 13343	AB002364	Genbank	2224672
Sequence 13344	AB002366	Genbank	2224676
Sequence 13345	AB002368	Genbank	2224680
Sequence 13346	AB002387	Genbank	2224718
Sequence 13347	AB002391	Genbank	6683696
Sequence 13348	AB002533	Genbank	1944124
Sequence 13349	AB003102	Genbank	1945608
Sequence 13350	AB003723	Genbank	2911141
Sequence 13351	AB004064	Genbank	6983841
Sequence 13352	AB004574	Genbank	3184394
Sequence 13353	AB004857	Genbank	2911111
Sequence 13354	AB006534	Genbank	2924619
Sequence 13355	AB006626	Genbank	6635126
Sequence 13356	AB007144	Genbank	2911155
Sequence 13357	AB007170	Genbank	3077765

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Sequence 13358	AB007874	Genbank	2887448
Sequence 13359	AB007890	Genbank	6634032
Sequence 13360	AB007956	Genbank	3413930
Sequence 13361	AB011083	Genbank	3043545
Sequence 13362	AB011105	Genbank	3043589
Sequence 13363	AB011111	Genbank	3043601
Sequence 13364	AB011120	Genbank	3043619
Sequence 13365	AB011148	Genbank	3043675
Sequence 13366	AB011149	Genbank	3043677
Sequence 13367	AB011155	Genbank	3043689
Sequence 13368	AB014545	Genbank	3327103
Sequence 13369	AB014547	Genbank	3327107
Sequence 13370	AB014560	Genbank	3327133
Sequence 13371	AB014563	Genbank	3327139
Sequence 13372	AB014570	Genbank	3327153
Sequence 13373	AB014579	Genbank	3327171
Sequence 13374	AB014589	Genbank	3327191
Sequence 13375	AB014600	Genbank	3327213
Sequence 13376	AB015639	Genbank	5821139
Sequence 13377	AB015752	Genbank	3746106
Sequence 13378	AB017103	Genbank	3493334
Sequence 13379	AB017335	Genbank	3582440
Sequence 13380	AB017548	Genbank	3885363
Sequence 13381	AB017654	Genbank	6979002
Sequence 13382	AB017709	Genbank	3650435
Sequence 13383	AB018257	Genbank	3882148
Sequence 13384	AB018260	Genbank	3882154
Sequence 13385	AB018267	Genbank	3882168
Sequence 13386	AB018319	Genbank	3882272
Sequence 13387	AB018330	Genbank	3882294
Sequence 13388	AB018340	Genbank	3882314
Sequence 13389	AB018342	Genbank	3882318
Sequence 13390	AB018344	Genbank	3882322
Sequence 13391	AB018353	Genbank	3882340
Sequence 13392	AB019038	Genbank	6970469
Sequence 13393	AB019408	Genbank	4587126
Sequence 13394	AB019441	Genbank	4512311
Sequence 13395	AB019524	Genbank	4519939
Sequence 13396	AB019527	Genbank	3869126
Sequence 13397	AB019564	Genbank	3885367
Sequence 13398	AB020018	Genbank	6456471
Sequence 13399	AB020236	Genbank	4760601
Sequence 13400	AB020335	Genbank	6518494
Sequence 13401	AB020637	Genbank	4240148
Sequence 13402	AB020656	Genbank	4240186
Sequence 13403	AB020660	Genbank	4240194
Sequence 13404	AB020662	Genbank	4240198
Sequence 13405	AB020676	Genbank	4240226
Sequence 13406	AB020682	Genbank	4240238
Sequence 13407	AB020694	Genbank	4240262
Sequence 13408	AB020705	Genbank	4240284
Sequence 13409	AB020711	Genbank	4240296
Sequence 13410	AB020859	Genbank	4003379
Sequence 13411	AB020868	Genbank	4003388
Sequence 13412	AB020982	Genbank	4417209
Sequence 13413	AB021470	Genbank	4586521



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Sequence 13414	AB021663	Genbank	4996450
Sequence 13415	AB022435	Genbank	4996607
Sequence 13416	AB022537	Genbank	6942217
Sequence 13417	AB022785	Genbank	4210446
Sequence 13418	AB023207	Genbank	4589623
Sequence 13419	AB023208	Genbank	4589625
Sequence 13420	AB023224	Genbank	4589657
Sequence 13421	AB023691	Genbank	6519222
Sequence 13422	AB024334	Genbank	6016837
Sequence 13423	AB025355	Genbank	5103146
Sequence 13424	AB025959	Genbank	6520072
Sequence 13425	AB027466	Genbank	6172220
Sequence 13426	AB028624	Genbank	5103045
Sequence 13427	AB028893	Genbank	6552364
Sequence 13428	AB029020	Genbank	5689530
Sequence 13429	AB029331	Genbank	5295999
Sequence 13430	AB030181	Genbank	6730949
Sequence 13431	AB030905	Genbank	5732186
Sequence 13432	AB032951	Genbank	6329748
Sequence 13433	AB032957	Genbank	6329818
Sequence 13434	AB032962	Genbank	6382013
Sequence 13435	AB032969	Genbank	6329965
Sequence 13436	AB033007	Genbank	6330242
Sequence 13437	AB033018	Genbank	6330350
Sequence 13438	AB033020	Genbank	6330364
Sequence 13439	AB033050	Genbank	6330623
Sequence 13440	AB033067	Genbank	6330797
Sequence 13441	AB033069	Genbank	6330811
Sequence 13442	AB033074	Genbank	6330846
Sequence 13443	AB033076	Genbank	6330860
Sequence 13444	AB033079	Genbank	6382025
Sequence 13445	AB033096	Genbank	6331225
Sequence 13446	AB034205	Genbank	6899845
Sequence 13447	AB037763	Genbank	7243064
Sequence 13448	AB037767	Genbank	7243072
Sequence 13449	AB037807	Genbank	7243152
Sequence 13450	AB037813	Genbank	7243164
Sequence 13451	AC000015	Genbank	4263638
Sequence 13452	AC000025	Genbank	4417318
Sequence 13453	AC000046	Genbank	4731059
Sequence 13454	AC000093	Genbank	4678240
Sequence 13455	AC000120	Genbank	1809224
Sequence 13456	AC000353	Genbank	6970735
Sequence 13457	AC000378	Genbank	2270906
Sequence 13458	AC000394	Genbank	2133911
Sequence 13459	AC001226	Genbank	2133862
Sequence 13460	AC001234	Genbank	4028939
Sequence 13461	AC002038	Genbank	2226439
Sequence 13462	AC002039	Genbank	2342716
Sequence 13463	AC002041	Genbank	2576343
Sequence 13464	AC002064	Genbank	2076723
Sequence 13465	AC002081	Genbank	2078453
Sequence 13466	AC002094	Genbank	2155224
Sequence 13467	AC002096	Genbank	2599243
Sequence 13468	AC002347	Genbank	2828783
Sequence 13469	AC002350	Genbank	2961443

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Sequence 13470	AC002365	Genbank	2358015
Sequence 13471	AC002366	Genbank	2739349
Sequence 13472	AC002394	Genbank	2815550
Sequence 13473	AC002395	Genbank	3540146
Sequence 13474	AC002398	Genbank	2529398
Sequence 13475	AC002401	Genbank	2599240
Sequence 13476	AC002487	Genbank	2341013
Sequence 13477	AC002522	Genbank	7124014
Sequence 13478	AC002542	Genbank	2393733
Sequence 13479	AC002544	Genbank	3337382
Sequence 13480	AC002558	Genbank	2580474
Sequence 13481	AC003004	Genbank	2522284
Sequence 13482	AC003007	Genbank	2911728
Sequence 13483	AC003026	Genbank	2815549
Sequence 13484	AC003029	Genbank	9965520
Sequence 13485	AC003037	Genbank	2920805
Sequence 13486	AC003041	Genbank	3264572
Sequence 13487	AC003046	Genbank	10043285
Sequence 13488	AC003070	Genbank	2865212
Sequence 13489	AC003103	Genbank	2842782
Sequence 13490	AC003104	Genbank	3253131
Sequence 13491	AC003663	Genbank	3097871
Sequence 13492	AC003682	Genbank	3264845
Sequence 13493	AC003688	Genbank	3789719
Sequence 13494	AC003963	Genbank	2995604
Sequence 13495	AC003989	Genbank	2772538
Sequence 13496	AC004006	Genbank	2781390
Sequence 13497	AC004013	Genbank	2781380
Sequence 13498	AC004073	Genbank	2822136
Sequence 13499	AC004084	Genbank	2822156
Sequence 13500	AC004106	Genbank	3150276
Sequence 13501	AC004126	Genbank	3242744
Sequence 13502	AC004142	Genbank	2880078
Sequence 13503	AC004148	Genbank	3482960
Sequence 13504	AC004152	Genbank	2894631
Sequence 13505	AC004156	Genbank	2896799
Sequence 13506	AC004158	Genbank	2982170
Sequence 13507	AC004221	Genbank	9665053
Sequence 13508	AC004222	Genbank	3108042
Sequence 13509	AC004223	Genbank	3253129
Sequence 13510	AC004227	Genbank	2911718
Sequence 13511	AC004228	Genbank	4263838
Sequence 13512	AC004233	Genbank	2914673
Sequence 13513	AC004236	Genbank	2914668
Sequence 13514	AC004258	Genbank	2924759
Sequence 13515	AC004263	Genbank	2935616
Sequence 13516	AC004381	Genbank	2982169
Sequence 13517	AC004382	Genbank	3252819
Sequence 13518	AC004388	Genbank	3046271
Sequence 13519	AC004408	Genbank	3873185
Sequence 13520	AC004466	Genbank	3617739
Sequence 13521	AC004477	Genbank	3688107
Sequence 13522	AC004494	Genbank	2996647
Sequence 13523	AC004507	Genbank	2996632
Sequence 13524	AC004520	Genbank	3004572
Sequence 13525	AC004522	Genbank	3006227

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Sequence 13526	AC004527	Genbank	4760422
Sequence 13527	AC004531	Genbank	3337392
Sequence 13528	AC004539	Genbank	3041851
Sequence 13529	AC004582	Genbank	3337307
Sequence 13530	AC004584	Genbank	3417305
Sequence 13531	AC004585	Genbank	3212882
Sequence 13532	AC004587	Genbank	3150014
Sequence 13533	AC004600	Genbank	4388746
Sequence 13534	AC004601	Genbank	3395446
Sequence 13535	AC004611	Genbank	3080643
Sequence 13536	AC004617	Genbank	3738114
Sequence 13537	AC004622	Genbank	3090700
Sequence 13538	AC004634	Genbank	3094993
Sequence 13539	AC004677	Genbank	3126881
Sequence 13540	AC004686	Genbank	3688105
Sequence 13541	AC004760	Genbank	3168626
Sequence 13542	AC004765	Genbank	4731046
Sequence 13543	AC004770	Genbank	3212836
Sequence 13544	AC004798	Genbank	3184497
Sequence 13545	AC004801	Genbank	4204244
Sequence 13546	AC004812	Genbank	3970970
Sequence 13547	AC004813	Genbank	4926912
Sequence 13548	AC004832	Genbank	6624129
Sequence 13549	AC004835	Genbank	4508154
Sequence 13550	AC004842	Genbank	4753286
Sequence 13551	AC004846	Genbank	7243869
Sequence 13552	AC004854	Genbank	4827328
Sequence 13553	AC004876	Genbank	4508148
Sequence 13554	AC004890	Genbank	4508146
Sequence 13555	AC004904	Genbank	4156180
Sequence 13556	AC004908	Genbank	4156179
Sequence 13557	AC004938	Genbank	3213059
Sequence 13558	AC004941	Genbank	4454517
Sequence 13559	AC004950	Genbank	4753269
Sequence 13560	AC004955	Genbank	4753267
Sequence 13561	AC004969	Genbank	4156159
Sequence 13562	AC004982	Genbank	3419846
Sequence 13563	AC004983	Genbank	4309885
Sequence 13564	AC004985	Genbank	5708490
Sequence 13565	AC004987	Genbank	3213010
Sequence 13566	AC004990	Genbank	3924668
Sequence 13567	AC004999	Genbank	3970963
Sequence 13568	AC005005	Genbank	4156153
Sequence 13569	AC005007	Genbank	4156151
Sequence 13570	AC005021	Genbank	3694657
Sequence 13571	AC005031	Genbank	3688109
Sequence 13572	AC005037	Genbank	4827310
Sequence 13573	AC005041	Genbank	4508118
Sequence 13574	AC005042	Genbank	4156138
Sequence 13575	AC005046	Genbank	6094632
Sequence 13576	AC005076	Genbank	4508110
Sequence 13577	AC005082	Genbank	5836159
Sequence 13578	AC005084	Genbank	3659503
Sequence 13579	AC005088	Genbank	4753221
Sequence 13580	AC005095	Genbank	4753220
Sequence 13581	AC005104	Genbank	4218027

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Sequence 13582	AC005166	Genbank	3242769
Sequence 13583	AC005187	Genbank	3522927
Sequence 13584	AC005189	Genbank	3264580
Sequence 13585	AC005193	Genbank	3309101
Sequence 13586	AC005203	Genbank	3273381
Sequence 13587	AC005212	Genbank	3287444
Sequence 13588	AC005251	Genbank	3287718
Sequence 13589	AC005253	Genbank	3288886
Sequence 13590	AC005261	Genbank	3289984
Sequence 13591	AC005262	Genbank	3289981
Sequence 13592	AC005300	Genbank	6492490
Sequence 13593	AC005318	Genbank	3885345
Sequence 13594	AC005332	Genbank	3659494
Sequence 13595	AC005360	Genbank	3367514
Sequence 13596	AC005363	Genbank	3367511
Sequence 13597	AC005366	Genbank	3367508
Sequence 13598	AC005387	Genbank	3395417
Sequence 13599	AC005391	Genbank	3399673
Sequence 13600	AC005406	Genbank	4580403
Sequence 13601	AC005409	Genbank	4249432
Sequence 13602	AC005410	Genbank	3450753
Sequence 13603	AC005484	Genbank	5091654
Sequence 13604	AC005488	Genbank	5836194
Sequence 13605	AC005509	Genbank	4176355
Sequence 13606	AC005531	Genbank	4153875
Sequence 13607	AC005550	Genbank	3478668
Sequence 13608	AC005562	Genbank	4153858
Sequence 13609	AC005613	Genbank	3540152
Sequence 13610	AC005627	Genbank	7243867
Sequence 13611	AC005629	Genbank	7243877
Sequence 13612	AC005630	Genbank	4159882
Sequence 13613	AC005661	Genbank	3818348
Sequence 13614	AC005668	Genbank	3641771
Sequence 13615	AC005669	Genbank	3702356
Sequence 13616	AC005726	Genbank	3810672
Sequence 13617	AC005730	Genbank	3779042
Sequence 13618	AC005740	Genbank	3687210
Sequence 13619	AC005768	Genbank	6598827
Sequence 13620	AC005785	Genbank	3702290
Sequence 13621	AC005789	Genbank	3702281
Sequence 13622	AC005828	Genbank	3789713
Sequence 13623	AC005829	Genbank	3873300
Sequence 13624	AC005837	Genbank	3849820
Sequence 13625	AC005838	Genbank	3947427
Sequence 13626	AC005839	Genbank	4079626
Sequence 13627	AC005841	Genbank	4731044
Sequence 13628	AC005876	Genbank	6249672
Sequence 13629	AC005880	Genbank	6249667
Sequence 13630	AC005899	Genbank	3935221
Sequence 13631	AC005912	Genbank	4165005
Sequence 13632	AC005923	Genbank	4309927
Sequence 13633	AC005924	Genbank	4309926
Sequence 13634	AC005969	Genbank	4309946
Sequence 13635	AC005998	Genbank	5649387
Sequence 13636	AC006009	Genbank	4753278
Sequence 13637	AC006011	Genbank	4508143

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Sequence 13638	AC006017	Genbank	4508141
Sequence 13639	AC006023	Genbank	4753260
Sequence 13640	AC006026	Genbank	6042101
Sequence 13641	AC006027	Genbank	4156149
Sequence 13642	AC006050	Genbank	4079627
Sequence 13643	AC006057	Genbank	4731048
Sequence 13644	AC006064	Genbank	4572650
Sequence 13645	AC006084	Genbank	3953485
Sequence 13646	AC006088	Genbank	4204701
Sequence 13647	AC006129	Genbank	3970933
Sequence 13648	AC006137	Genbank	9887710
Sequence 13649	AC006141	Genbank	4580411
Sequence 13650	AC006153	Genbank	4309917
Sequence 13651	AC006160	Genbank	5701616
Sequence 13652	AC006205	Genbank	5815508
Sequence 13653	AC006206	Genbank	4309925
Sequence 13654	AC006207	Genbank	4309924
Sequence 13655	AC006238	Genbank	4204704
Sequence 13656	AC006251	Genbank	4309945
Sequence 13657	AC006254	Genbank	4726099
Sequence 13658	AC006255	Genbank	5306223
Sequence 13659	AC006257	Genbank	4092478
Sequence 13660	AC006273	Genbank	4096060
Sequence 13661	AC006347	Genbank	4309919
Sequence 13662	AC006349	Genbank	7243873
Sequence 13663	AC006409	Genbank	4454486
Sequence 13664	AC006430	Genbank	6453929
Sequence 13665	AC006449	Genbank	6102666
Sequence 13666	AC006450	Genbank	6997336
Sequence 13667	AC006475	Genbank	4753283
Sequence 13668	AC006480	Genbank	6289252
Sequence 13669	AC006487	Genbank	4314418
Sequence 13670	AC006504	Genbank	4220442
Sequence 13671	AC006509	Genbank	5815507
Sequence 13672	AC006512	Genbank	4926863
Sequence 13673	AC006518	Genbank	4713939
Sequence 13674	AC006536	Genbank	4235135
Sequence 13675	AC006539	Genbank	4235141
Sequence 13676	AC006561	Genbank	4558534
Sequence 13677	AC006581	Genbank	4914350
Sequence 13678	AC006597	Genbank	4512725
Sequence 13679	AC006930	Genbank	4309680
Sequence 13680	AC006973	Genbank	4699968
Sequence 13681	AC006987	Genbank	5123989
Sequence 13682	AC007014	Genbank	4371263
Sequence 13683	AC007029	Genbank	7243872
Sequence 13684	AC007038	Genbank	5708475
Sequence 13685	AC007041	Genbank	5708471
Sequence 13686	AC007050	Genbank	6456174
Sequence 13687	AC007055	Genbank	4885691
Sequence 13688	AC007057	Genbank	4680440
Sequence 13689	AC007114	Genbank	4581193
Sequence 13690	AC007130	Genbank	5001538
Sequence 13691	AC007172	Genbank	4731066
Sequence 13692	AC007204	Genbank	4559317
Sequence 13693	AC007207	Genbank	6466489

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Sequence 13694	AC007216	Genbank	6806842
Sequence 13695	AC007225	Genbank	6715703
Sequence 13696	AC007229	Genbank	4567173
Sequence 13697	AC007239	Genbank	5523828
Sequence 13698	AC007252	Genbank	5091646
Sequence 13699	AC007314	Genbank	4662678
Sequence 13700	AC007324	Genbank	7923342
Sequence 13701	AC007327	Genbank	4587630
Sequence 13702	AC007390	Genbank	6358845
Sequence 13703	AC007393	Genbank	5306300
Sequence 13704	AC007446	Genbank	5069495
Sequence 13705	AC007528	Genbank	5263309
Sequence 13706	AC007536	Genbank	5917929
Sequence 13707	AC007541	Genbank	4982536
Sequence 13708	AC007546	Genbank	5668756
Sequence 13709	AC007551	Genbank	4809347
Sequence 13710	AC007566	Genbank	4835815
Sequence 13711	AC007766	Genbank	5030437
Sequence 13712	AC007848	Genbank	5923645
Sequence 13713	AC007860	Genbank	5649179
Sequence 13714	AC007868	Genbank	6041758
Sequence 13715	AC007934	Genbank	6721208
Sequence 13716	AC008009	Genbank	5668757
Sequence 13717	AC008018	Genbank	7958973
Sequence 13718	AC008102	Genbank	9797815
Sequence 13719	AC008115	Genbank	5801654
Sequence 13720	AC008123	Genbank	6006046
Sequence 13721	AC008151	Genbank	5629925
Sequence 13722	AC008498	Genbank	6850299
Sequence 13723	AC008545	Genbank	6721145
Sequence 13724	AC008583	Genbank	7158894
Sequence 13725	AC008893	Genbank	7259691
Sequence 13726	AC008981	Genbank	6721142
Sequence 13727	AC009298	Genbank	7243882
Sequence 13728	AC009363	Genbank	6648145
Sequence 13729	AC009509	Genbank	6492473
Sequence 13730	AC009946	Genbank	6604542
Sequence 13731	AC010077	Genbank	5870275
Sequence 13732	AC010168	Genbank	6855156
Sequence 13733	AC010197	Genbank	6143841
Sequence 13734	AC010436	Genbank	6938861
Sequence 13735	AC010525	Genbank	7248932
Sequence 13736	AC010582	Genbank	6721135
Sequence 13737	AC010722	Genbank	6587939
Sequence 13738	AC011331	Genbank	9929686
Sequence 13739	AC011599	Genbank	7113871
Sequence 13740	AC012085	Genbank	6634755
Sequence 13741	AC012087	Genbank	7114465
Sequence 13742	AC016831	Genbank	6539289
Sequence 13743	AC016941	Genbank	8567654
Sequence 13744	AC020663	Genbank	6682593
Sequence 13745	AC021049	Genbank	7248920
Sequence 13746	AF000982	Genbank	2580549
Sequence 13747	AF001549	Genbank	3355302
Sequence 13748	AF001552	Genbank	2339976
Sequence 13749	AF002668	Genbank	2232173

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Sequence 13750	AF004162	Genbank	3046385
Sequence 13751	AF004337	Genbank	2245557
Sequence 13752	AF004338	Genbank	2245558
Sequence 13753	AF004339	Genbank	2245559
Sequence 13754	AF004342	Genbank	2245565
Sequence 13755	AF006513	Genbank	2645428
Sequence 13756	AF006621	Genbank	7629276
Sequence 13757	AF007134	Genbank	2852608
Sequence 13758	AF007146	Genbank	2852624
Sequence 13759	AF007189	Genbank	2459927
Sequence 13760	AF007544	Genbank	2970122
Sequence 13761	AF007872	Genbank	2358280
Sequence 13762	AF007875	Genbank	2258417
Sequence 13763	AF008303	Genbank	2580619
Sequence 13764	AF009242	Genbank	2338289
Sequence 13765	AF010313	Genbank	6468761
Sequence 13766	AF011889	Genbank	2335186
Sequence 13767	AF013488	Genbank	2343184
Sequence 13768	AF013758	Genbank	3046899
Sequence 13769	AF013970	Genbank	2801421
Sequence 13770	AF014398	Genbank	8148061
Sequence 13771	AF015812	Genbank	2599359
Sequence 13772	AF017790	Genbank	2501872
Sequence 13773	AF020352	Genbank	2655054
Sequence 13774	AF020782	Genbank	2522480
Sequence 13775	AF021819	Genbank	2460317
Sequence 13776	AF022211	Genbank	2465723
Sequence 13777	AF022728	Genbank	2935182
Sequence 13778	AF026802	Genbank	5712085
Sequence 13779	AF026852	Genbank	3599965
Sequence 13780	AF027205	Genbank	2598967
Sequence 13781	AF028832	Genbank	3287488
Sequence 13782	AF029750	Genbank	2587057
Sequence 13783	AF029786	Genbank	3403166
Sequence 13784	AF031379	Genbank	4894208
Sequence 13785	AF035286	Genbank	2661038
Sequence 13786	AF035296	Genbank	2661052
Sequence 13787	AF035304	Genbank	2661064
Sequence 13788	AF035840	Genbank	3800739
Sequence 13789	AF036715	Genbank	4007385
Sequence 13790	AF036718	Genbank	2708629
Sequence 13791	AF037447	Genbank	6466790
Sequence 13792	AF038200	Genbank	2795921
Sequence 13793	AF038406	Genbank	3523122
Sequence 13794	AF039019	Genbank	2828109
Sequence 13795	AF039575	Genbank	2773157
Sequence 13796	AF039594	Genbank	3366667
Sequence 13797	AF040628	Genbank	3869269
Sequence 13798	AF042836	Genbank	3776241
Sequence 13799	AF043105	Genbank	3169541
Sequence 13800	AF044956	Genbank	5326827
Sequence 13801	AF044957	Genbank	4164445
Sequence 13802	AF044959	Genbank	3348136
Sequence 13803	AF045447	Genbank	2865655
Sequence 13804	AF047184	Genbank	2909859
Sequence 13805	AF047185	Genbank	2909861

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Sequence 13806	AF047438	Genbank	3335131
Sequence 13807	AF047440	Genbank	3335135
Sequence 13808	AF047472	Genbank	2921872
Sequence 13809	AF050638	Genbank	5326819
Sequence 13810	AF050639	Genbank	4164453
Sequence 13811	AF052092	Genbank	3360398
Sequence 13812	AF052129	Genbank	3360438
Sequence 13813	AF052164	Genbank	3360475
Sequence 13814	AF052182	Genbank	3360494
Sequence 13815	AF052573	Genbank	3510694
Sequence 13816	AF052578	Genbank	2967847
Sequence 13817	AF053356	Genbank	3135305
Sequence 13818	AF054183	Genbank	4092053
Sequence 13819	AF054990	Genbank	3005703
Sequence 13820	AF055066	Genbank	3273727
Sequence 13821	AF055474	Genbank	nil
Sequence 13822	AF055584	Genbank	3649607
Sequence 13823	AF057356	Genbank	3063652
Sequence 13824	AF057735	Genbank	4165042
Sequence 13825	AF058293	Genbank	3047377
Sequence 13826	AF058988	Genbank	3300089
Sequence 13827	AF059527	Genbank	4454661
Sequence 13828	AF060798	Genbank	3372665
Sequence 13829	AF061737	Genbank	4335938
Sequence 13830	AF062077	Genbank	3641524
Sequence 13831	AF064019	Genbank	3347856
Sequence 13832	AF064861	Genbank	3171154
Sequence 13833	AF067139	Genbank	3337440
Sequence 13834	AF068302	Genbank	4584876
Sequence 13835	AF068754	Genbank	3283408
Sequence 13836	AF068755	Genbank	4321979
Sequence 13837	AF069378	Genbank	3982733
Sequence 13838	AF069532	Genbank	3892190
Sequence 13839	AF070523	Genbank	3764088
Sequence 13840	AF070539	Genbank	3387896
Sequence 13841	AF070556	Genbank	3387921
Sequence 13842	AF070630	Genbank	3283898
Sequence 13843	AF070635	Genbank	3283905
Sequence 13844	AF070638	Genbank	3283909
Sequence 13845	AF070646	Genbank	3283920
Sequence 13846	AF070649	Genbank	3283923
Sequence 13847	AF070655	Genbank	4454685
Sequence 13848	AF070659	Genbank	4454693
Sequence 13849	AF070669	Genbank	4454713
Sequence 13850	AF070673	Genbank	3978241
Sequence 13851	AF072097	Genbank	5725511
Sequence 13852	AF073298	Genbank	3641537
Sequence 13853	AF075061	Genbank	3377602
Sequence 13854	AF077030	Genbank	4689107
Sequence 13855	AF077036	Genbank	4689119
Sequence 13856	AF077043	Genbank	4689133
Sequence 13857	AF077044	Genbank	4689135
Sequence 13858	AF077052	Genbank	4689151
Sequence 13859	AF077200	Genbank	4679013
Sequence 13860	AF077202	Genbank	4679017
Sequence 13861	AF078847	Genbank	5531808



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Sequence 13862	AF078850	Genbank	5531814
Sequence 13863	AF082283	Genbank	4092066
Sequence 13864	AF082513	Genbank	3649656
Sequence 13865	AF083441	Genbank	5813822
Sequence 13866	AF085844	Genbank	3483158
Sequence 13867	AF086210	Genbank	3483555
Sequence 13868	AF086329	Genbank	3483674
Sequence 13869	AF086337	Genbank	3483682
Sequence 13870	AF086378	Genbank	3483723
Sequence 13871	AF086490	Genbank	3483835
Sequence 13872	AF086557	Genbank	3483902
Sequence 13873	AF086564	Genbank	3483909
Sequence 13874	AF086628	Genbank	4240457
Sequence 13875	AF087020	Genbank	3851144
Sequence 13876	AF087160	Genbank	3869380
Sequence 13877	AF087959	Genbank	3523165
Sequence 13878	AF088060	Genbank	3523266
Sequence 13879	AF088071	Genbank	3523277
Sequence 13880	AF090095	Genbank	4063630
Sequence 13881	AF090947	Genbank	6690255
Sequence 13882	AF091075	Genbank	3859987
Sequence 13883	AF092094	Genbank	4426606
Sequence 13884	AF092124	Genbank	3659900
Sequence 13885	AF092128	Genbank	5138905
Sequence 13886	AF092130	Genbank	5138909
Sequence 13887	AF092135	Genbank	5138919
Sequence 13888	AF097026	Genbank	6409120
Sequence 13889	AF097514	Genbank	4808600
Sequence 13890	AF098162	Genbank	3929582
Sequence 13891	AF100615	Genbank	4808624
Sequence 13892	AF100616	Genbank	4808626
Sequence 13893	AF100748	Genbank	5410281
Sequence 13894	AF100757	Genbank	5410299
Sequence 13895	AF100760	Genbank	5410305
Sequence 13896	AF102803	Genbank	4092759
Sequence 13897	AF104233	Genbank	5880481
Sequence 13898	AF104913	Genbank	3941723
Sequence 13899	AF106622	Genbank	4378528
Sequence 13900	AF106681	Genbank	5410327
Sequence 13901	AF109134	Genbank	4139227
Sequence 13902	AF109718	Genbank	3978547
Sequence 13903	AF110460	Genbank	4324698
Sequence 13904	AF111847	Genbank	7211441
Sequence 13905	AF112213	Genbank	6563213
Sequence 13906	AF112222	Genbank	6563229
Sequence 13907	AF112227	Genbank	4545218
Sequence 13908	AF113011	Genbank	6642745
Sequence 13909	AF113016	Genbank	6642755
Sequence 13910	AF113141	Genbank	4512031
Sequence 13911	AF113535	Genbank	6523824
Sequence 13912	AF113540	Genbank	6523834
Sequence 13913	AF113615	Genbank	5106955
Sequence 13914	AF113680	Genbank	6855605
Sequence 13915	AF113690	Genbank	6855619
Sequence 13916	AF113700	Genbank	6855634
Sequence 13917	AF113701	Genbank	6855635

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Sequence 13918	AF115402	Genbank	4559272
Sequence 13919	AF116910	Genbank	4768837
Sequence 13920	AF117235	Genbank	6563243
Sequence 13921	AF117888	Genbank	5732617
Sequence 13922	AF118084	Genbank	6650813
Sequence 13923	AF118124	Genbank	4235636
Sequence 13924	AF118649	Genbank	6840946
Sequence 13925	AF119297	Genbank	4633508
Sequence 13926	AF123052	Genbank	5106556
Sequence 13927	AF125530	Genbank	6563259
Sequence 13928	AF126023	Genbank	6563275
Sequence 13929	AF126782	Genbank	6318547
Sequence 13930	AF127577	Genbank	7019596
Sequence 13931	AF128527	Genbank	4928043
Sequence 13932	AF128536	Genbank	5305705
Sequence 13933	AF129756	Genbank	4337095
Sequence 13934	AF131738	Genbank	4406548
Sequence 13935	AF131748	Genbank	4406563
Sequence 13936	AF131758	Genbank	4406576
Sequence 13937	AF131771	Genbank	4406595
Sequence 13938	AF131777	Genbank	4406602
Sequence 13939	AF131781	Genbank	4406608
Sequence 13940	AF131814	Genbank	4406648
Sequence 13941	AF131838	Genbank	4406677
Sequence 13942	AF131856	Genbank	4406702
Sequence 13943	AF132939	Genbank	4680648
Sequence 13944	AF132942	Genbank	4680654
Sequence 13945	AF132973	Genbank	4680716
Sequence 13946	AF132984	Genbank	4959567
Sequence 13947	AF134726	Genbank	4529886
Sequence 13948	AF135162	Genbank	7259481
Sequence 13949	AF135488	Genbank	5668619
Sequence 13950	AF146651	Genbank	5020073
Sequence 13951	AF147330	Genbank	4761681
Sequence 13952	AF147378	Genbank	4761729
Sequence 13953	AF147412	Genbank	4761763
Sequence 13954	AF150089	Genbank	5107165
Sequence 13955	AF151052	Genbank	7106825
Sequence 13956	AF151103	Genbank	5758136
Sequence 13957	AF151109	Genbank	6166337
Sequence 13958	AF151801	Genbank	4929554
Sequence 13959	AF151807	Genbank	4929566
Sequence 13960	AF151832	Genbank	4929616
Sequence 13961	AF151835	Genbank	4929622
Sequence 13962	AF151878	Genbank	4929708
Sequence 13963	AF151903	Genbank	4929758
Sequence 13964	AF151905	Genbank	4929762
Sequence 13965	AF151906	Genbank	4929764
Sequence 13966	AF152363	Genbank	5669134
Sequence 13967	AF153273	Genbank	5932030
Sequence 13968	AF153274	Genbank	5932031
Sequence 13969	AF153608	Genbank	5231140
Sequence 13970	AF156965	Genbank	5731112
Sequence 13971	AF158180	Genbank	6959307
Sequence 13972	AF159295	Genbank	5714635
Sequence 13973	AF161384	Genbank	6841181

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Sequence 13974	AF161389	Genbank	6841191
Sequence 13975	AF161428	Genbank	6841269
Sequence 13976	AF161448	Genbank	6841309
Sequence 13977	AF161464	Genbank	6841451
Sequence 13978	AF161479	Genbank	6841481
Sequence 13979	AF161481	Genbank	6841485
Sequence 13980	AF161485	Genbank	6841493
Sequence 13981	AF161500	Genbank	6841523
Sequence 13982	AF161503	Genbank	6841529
Sequence 13983	AF161509	Genbank	6841541
Sequence 13984	AF161512	Genbank	6841547
Sequence 13985	AF161541	Genbank	6841349
Sequence 13986	AF161556	Genbank	6841379
Sequence 13987	AF165926	Genbank	5817858
Sequence 13988	AF168956	Genbank	5702387
Sequence 13989	AF172066	Genbank	5733811
Sequence 13990	AF176315	Genbank	5823349
Sequence 13991	AF181896	Genbank	6272683
Sequence 13992	AF187320	Genbank	6164847
Sequence 13993	AF187554	Genbank	6653225
Sequence 13994	AF188745	Genbank	6425043
Sequence 13995	AF189712	Genbank	6760474
Sequence 13996	AF190465	Genbank	6120105
Sequence 13997	AF191018	Genbank	6457339
Sequence 13998	AF191298	Genbank	7656642
Sequence 13999	AF201077	Genbank	6456748
Sequence 14000	AF203815	Genbank	6979641
Sequence 14001	AF205588	Genbank	6531675
Sequence 14002	AF207550	Genbank	6470333
Sequence 14003	AF216305	Genbank	6942010
Sequence 14004	AF228703	Genbank	7158868
Sequence 14005	AF228704	Genbank	7158871
Sequence 14006	AJ000519	Genbank	2739214
Sequence 14007	AJ001014	Genbank	3171909
Sequence 14008	AJ001866	Genbank	2969902
Sequence 14009	AJ001981	Genbank	2546978
Sequence 14010	AJ002030	Genbank	2570006
Sequence 14011	AJ002308	Genbank	2959871
Sequence 14012	AJ002385	Genbank	2597930
Sequence 14013	AJ006470	Genbank	3687321
Sequence 14014	AJ010069	Genbank	3483012
Sequence 14015	AJ010597	Genbank	3559873
Sequence 14016	AJ012409	Genbank	3881975
Sequence 14017	AJ012499	Genbank	5441359
Sequence 14018	AJ223812	Genbank	2894518
Sequence 14019	AJ224442	Genbank	2911586
Sequence 14020	AJ230595	Genbank	4583774
Sequence 14021	AJ230596	Genbank	4583775
Sequence 14022	AJ230605	Genbank	4583784
Sequence 14023	AJ238243	Genbank	4826530
Sequence 14024	AJ238283	Genbank	4704219
Sequence 14025	AJ238374	Genbank	6634418
Sequence 14026	AJ245719	Genbank	6688168
Sequence 14027	AJ249731	Genbank	5921469
Sequence 14028	AJ250042	Genbank	6013005
Sequence 14029	AJ250915	Genbank	6996445

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Sequence 14030	AJ251961	Genbank	6634453
Sequence 14031	AJ271216	Genbank	6966966
Sequence 14032	AK000018	Genbank	7019828
Sequence 14033	AK000023	Genbank	7019837
Sequence 14034	AK000035	Genbank	7019855
Sequence 14035	AK000208	Genbank	7020141
Sequence 14036	AK000291	Genbank	7020274
Sequence 14037	AK000348	Genbank	7020373
Sequence 14038	AK000365	Genbank	7020402
Sequence 14039	AK000395	Genbank	7020455
Sequence 14040	AK000426	Genbank	7020505
Sequence 14041	AK000434	Genbank	7020520
Sequence 14042	AK000453	Genbank	7020550
Sequence 14043	AK000462	Genbank	7020566
Sequence 14044	AK000470	Genbank	7020580
Sequence 14045	AK000507	Genbank	7020644
Sequence 14046	AK000548	Genbank	7020717
Sequence 14047	AK000560	Genbank	7020738
Sequence 14048	AK000571	Genbank	7020756
Sequence 14049	AK000585	Genbank	7020779
Sequence 14050	AK000615	Genbank	7020827
Sequence 14051	AK000620	Genbank	7020834
Sequence 14052	AK000624	Genbank	7020839
Sequence 14053	AK000655	Genbank	7020888
Sequence 14054	AK000667	Genbank	7020906
Sequence 14055	AK000669	Genbank	7020909
Sequence 14056	AK000721	Genbank	7020985
Sequence 14057	AK000725	Genbank	7020990
Sequence 14058	AK000739	Genbank	7021014
Sequence 14059	AK000745	Genbank	7021025
Sequence 14060	AK000752	Genbank	7021035
Sequence 14061	AK000765	Genbank	7021058
Sequence 14062	AK000800	Genbank	7021104
Sequence 14063	AK000818	Genbank	7021128
Sequence 14064	AK000826	Genbank	7021139
Sequence 14065	AK000866	Genbank	7021190
Sequence 14066	AK000891	Genbank	7021840
Sequence 14067	AK000933	Genbank	7021908
Sequence 14068	AK000934	Genbank	7021909
Sequence 14069	AK000959	Genbank	7021945
Sequence 14070	AK000991	Genbank	7021994
Sequence 14071	AK001006	Genbank	7022017
Sequence 14072	AK001093	Genbank	7022142
Sequence 14073	AK001105	Genbank	7022160
Sequence 14074	AK001154	Genbank	7022228
Sequence 14075	AK001237	Genbank	7022366
Sequence 14076	AK001285	Genbank	7022444
Sequence 14077	AK001330	Genbank	7022520
Sequence 14078	AK001387	Genbank	7022615
Sequence 14079	AK001413	Genbank	7022655
Sequence 14080	AK001441	Genbank	7022699
Sequence 14081	AK001451	Genbank	7022717
Sequence 14082	AK001469	Genbank	7022747
Sequence 14083	AK001493	Genbank	7022783
Sequence 14084	AK001536	Genbank	7022851
Sequence 14085	AK001571	Genbank	7022906

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Sequence 14086	AK001656	Genbank	7023047
Sequence 14087	AK001690	Genbank	7023105
Sequence 14088	AK001691	Genbank	7023106
Sequence 14089	AK001717	Genbank	7023151
Sequence 14090	AK001718	Genbank	7023153
Sequence 14091	AK001747	Genbank	7023203
Sequence 14092	AK001762	Genbank	7023231
Sequence 14093	AK001855	Genbank	7023382
Sequence 14094	AK001877	Genbank	7023416
Sequence 14095	AK001878	Genbank	7023418
Sequence 14096	AK001961	Genbank	7023549
Sequence 14097	AK002002	Genbank	7023620
Sequence 14098	AK002046	Genbank	7023689
Sequence 14099	AK002102	Genbank	7023781
Sequence 14100	AK002169	Genbank	7023884
Sequence 14101	AK002190	Genbank	7023914
Sequence 14102	AL008582	Genbank	5360981
Sequence 14103	AL008639	Genbank	6599068
Sequence 14104	AL008721	Genbank	3171883
Sequence 14105	AL008725	Genbank	2791551
Sequence 14106	AL009051	Genbank	2995195
Sequence 14107	AL009181	Genbank	2853179
Sequence 14108	AL020993	Genbank	3980107
Sequence 14109	AL020995	Genbank	5881341
Sequence 14110	AL021069	Genbank	2853183
Sequence 14111	AL021368	Genbank	3080468
Sequence 14112	AL021546	Genbank	2826890
Sequence 14113	AL021920	Genbank	3264535
Sequence 14114	AL022165	Genbank	3281985
Sequence 14115	AL022238	Genbank	4176442
Sequence 14116	AL022240	Genbank	4826471
Sequence 14117	AL022302	Genbank	5262844
Sequence 14118	AL022312	Genbank	4914501
Sequence 14119	AL022313	Genbank	4200326
Sequence 14120	AL022316	Genbank	4691242
Sequence 14121	AL022320	Genbank	4914513
Sequence 14122	AL022328	Genbank	5263010
Sequence 14123	AL022394	Genbank	9581758
Sequence 14124	AL022395	Genbank	4468287
Sequence 14125	AL022725	Genbank	5679748
Sequence 14126	AL023284	Genbank	3355875
Sequence 14127	AL023494	Genbank	5360992
Sequence 14128	AL023798	Genbank	3550031
Sequence 14129	AL024493	Genbank	3288439
Sequence 14130	AL030996	Genbank	3688349
Sequence 14131	AL031003	Genbank	4007185
Sequence 14132	AL031259	Genbank	3790132
Sequence 14133	AL031274	Genbank	3421083
Sequence 14134	AL031287	Genbank	4914533
Sequence 14135	AL031295	Genbank	4376011
Sequence 14136	AL031368	Genbank	4455593
Sequence 14137	AL031390	Genbank	5002609
Sequence 14138	AL031428	Genbank	5931719
Sequence 14139	AL031431	Genbank	4938290
Sequence 14140	AL031432	Genbank	4375969
Sequence 14141	AL031433	Genbank	4826442

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Sequence 14142	AL031447	Genbank	4826431
Sequence 14143	AL031597	Genbank	4775640
Sequence 14144	AL031662	Genbank	9716901
Sequence 14145	AL031667	Genbank	9408727
Sequence 14146	AL031681	Genbank	9408729
Sequence 14147	AL031710	Genbank	9798435
Sequence 14148	AL031716	Genbank	4826474
Sequence 14149	AL031732	Genbank	4581343
Sequence 14150	AL031781	Genbank	4038570
Sequence 14151	AL032821	Genbank	4572584
Sequence 14152	AL033377	Genbank	4826462
Sequence 14153	AL033397	Genbank	4902626
Sequence 14154	AL033522	Genbank	4191258
Sequence 14155	AL033531	Genbank	6807582
Sequence 14156	AL033543	Genbank	4581346
Sequence 14157	AL034417	Genbank	5102616
Sequence 14158	AL034548	Genbank	7263904
Sequence 14159	AL035209	Genbank	4160217
Sequence 14160	AL035413	Genbank	6010110
Sequence 14161	AL035420	Genbank	5918161
Sequence 14162	AL035425	Genbank	6465823
Sequence 14163	AL035458	Genbank	6624641
Sequence 14164	AL035541	Genbank	9581764
Sequence 14165	AL035652	Genbank	9650702
Sequence 14166	AL035681	Genbank	4902689
Sequence 14167	AL035699	Genbank	4826515
Sequence 14168	AL049249	Genbank	4499987
Sequence 14169	AL049282	Genbank	4500041
Sequence 14170	AL049404	Genbank	4500192
Sequence 14171	AL049557	Genbank	5596765
Sequence 14172	AL049563	Genbank	4902753
Sequence 14173	AL049564	Genbank	4902757
Sequence 14174	AL049589	Genbank	5679567
Sequence 14175	AL049696	Genbank	5931893
Sequence 14176	AL049742	Genbank	5419783
Sequence 14177	AL049761	Genbank	5738437
Sequence 14178	AL049766	Genbank	5763746
Sequence 14179	AL049776	Genbank	6681704
Sequence 14180	AL049779	Genbank	8176894
Sequence 14181	AL049829	Genbank	8217859
Sequence 14182	AL049844	Genbank	5924019
Sequence 14183	AL049869	Genbank	8217861
Sequence 14184	AL049929	Genbank	4884174
Sequence 14185	AL049968	Genbank	4884217
Sequence 14186	AL049987	Genbank	4884238
Sequence 14187	AL050021	Genbank	4884264
Sequence 14188	AL050027	Genbank	4884266
Sequence 14189	AL050035	Genbank	4884276
Sequence 14190	AL050083	Genbank	4884317
Sequence 14191	AL050161	Genbank	4884375
Sequence 14192	AL050170	Genbank	4884165
Sequence 14193	AL050215	Genbank	4884454
Sequence 14194	AL050273	Genbank	4886450
Sequence 14195	AL050275	Genbank	4886500
Sequence 14196	AL050290	Genbank	4886512
Sequence 14197	AL050343	Genbank	6137008

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Sequence 14198	AL050363	Genbank	4914597
Sequence 14199	AL050383	Genbank	4914585
Sequence 14200	AL050392	Genbank	4914613
Sequence 14201	AL078591	Genbank	6562085
Sequence 14202	AL078621	Genbank	6013067
Sequence 14203	AL079295	Genbank	5102607
Sequence 14204	AL079304	Genbank	8176897
Sequence 14205	AL079342	Genbank	6018784
Sequence 14206	AL080088	Genbank	5262504
Sequence 14207	AL080089	Genbank	5262506
Sequence 14208	AL080097	Genbank	5262519
Sequence 14209	AL080109	Genbank	5262535
Sequence 14210	AL080135	Genbank	5262576
Sequence 14211	AL080144	Genbank	5262592
Sequence 14212	AL080186	Genbank	5262664
Sequence 14213	AL080241	Genbank	5730204
Sequence 14214	AL080250	Genbank	5804917
Sequence 14215	AL080276	Genbank	5763753
Sequence 14216	AL096773	Genbank	5918011
Sequence 14217	AL096803	Genbank	6010162
Sequence 14218	AL109657	Genbank	6136991
Sequence 14219	AL109684	Genbank	5689805
Sequence 14220	AL109925	Genbank	7105935
Sequence 14221	AL110183	Genbank	5817095
Sequence 14222	AL110185	Genbank	5817098
Sequence 14223	AL110193	Genbank	5817109
Sequence 14224	AL110194	Genbank	5817111
Sequence 14225	AL110202	Genbank	5817121
Sequence 14226	AL110208	Genbank	5817127
Sequence 14227	AL110262	Genbank	5817224
Sequence 14228	AL117334	Genbank	7248316
Sequence 14229	AL117424	Genbank	5911856
Sequence 14230	AL117430	Genbank	5911865
Sequence 14231	AL117442	Genbank	5911885
Sequence 14232	AL117558	Genbank	5912097
Sequence 14233	AL117599	Genbank	5912167
Sequence 14234	AL117621	Genbank	5912202
Sequence 14235	AL117648	Genbank	5912240
Sequence 14236	AL117662	Genbank	5912257
Sequence 14237	AL117666	Genbank	5912264
Sequence 14238	AL121576	Genbank	8176910
Sequence 14239	AL121580	Genbank	6456854
Sequence 14240	AL121603	Genbank	6434634
Sequence 14241	AL121656	Genbank	7159617
Sequence 14242	AL121782	Genbank	6456831
Sequence 14243	AL121790	Genbank	8919824
Sequence 14244	AL121913	Genbank	7161781
Sequence 14245	AL121963	Genbank	7161783
Sequence 14246	AL122003	Genbank	6580480
Sequence 14247	AL122013	Genbank	7242500
Sequence 14248	AL122050	Genbank	6093244
Sequence 14249	AL122066	Genbank	6102860
Sequence 14250	AL122089	Genbank	6102899
Sequence 14251	AL133051	Genbank	6453468
Sequence 14252	AL133060	Genbank	6453483
Sequence 14253	AL133094	Genbank	6453548

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Sequence 14254	AL133238	Genbank	6624577
Sequence 14255	AL133241	Genbank	7630038
Sequence 14256	AL133243	Genbank	6491713
Sequence 14257	AL133246	Genbank	7594587
Sequence 14258	AL133370	Genbank	8248722
Sequence 14259	AL133453	Genbank	7009594
Sequence 14260	AL133455	Genbank	7019734
Sequence 14261	AL133555	Genbank	6599122
Sequence 14262	AL135744	Genbank	6682291
Sequence 14263	AL135858	Genbank	7159622
Sequence 14264	AL136296	Genbank	8217913
Sequence 14265	AL136504	Genbank	7018294
Sequence 14266	AL137440	Genbank	6808001
Sequence 14267	AL137450	Genbank	6808024
Sequence 14268	AL137489	Genbank	6808110
Sequence 14269	AL137496	Genbank	6808137
Sequence 14270	AL137553	Genbank	6808238
Sequence 14271	AL137567	Genbank	6808276
Sequence 14272	AL137659	Genbank	6807778
Sequence 14273	AL137673	Genbank	6807841
Sequence 14274	AL137681	Genbank	6807931
Sequence 14275	AL137714	Genbank	6808128
Sequence 14276	AL137750	Genbank	6808386
Sequence 14277	AL157428	Genbank	7018458
Sequence 14278	AL157464	Genbank	7018479
Sequence 14279	AP000008	Genbank	3132318
Sequence 14280	AP000031	Genbank	3132341
Sequence 14281	AP000038	Genbank	3132348
Sequence 14282	AP000351	Genbank	6069325
Sequence 14283	AP000354	Genbank	5103017
Sequence 14284	AP000473	Genbank	6942329
Sequence 14285	AP000525	Genbank	5931503
Sequence 14286	AP000526	Genbank	5931504
Sequence 14287	AP000962	Genbank	6942330
Sequence 14288	AP001055	Genbank	6693605
Sequence 14289	AP001136	Genbank	6970360
Sequence 14290	AP001137	Genbank	6970361
Sequence 14291	AP001172	Genbank	6983884
Sequence 14292	AP001343	Genbank	7209831
Sequence 14293	AP001346	Genbank	7209834
Sequence 14294	D10493	Genbank	219932
Sequence 14295	D12485	Genbank	219943
Sequence 14296	D14082	Genbank	468933
Sequence 14297	D14533	Genbank	286028
Sequence 14298	D14540	Genbank	467511
Sequence 14299	D14658	Genbank	285940
Sequence 14300	D14665	Genbank	6630617
Sequence 14301	D14696	Genbank	285962
Sequence 14302	D14710	Genbank	559324
Sequence 14303	D21089	Genbank	475156
Sequence 14304	D21235	Genbank	498145
Sequence 14305	D21262	Genbank	434764
Sequence 14306	D25215	Genbank	517114
Sequence 14307	D25274	Genbank	464185
Sequence 14308	D26600	Genbank	565650
Sequence 14309	D28468	Genbank	460704



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Sequence 14310	D29011	Genbank	558525
Sequence 14311	D29643	Genbank	473936
Sequence 14312	D29805	Genbank	474986
Sequence 14313	D29954	Genbank	473940
Sequence 14314	D29958	Genbank	473948
Sequence 14315	D30648	Genbank	506337
Sequence 14316	D31885	Genbank	505097
Sequence 14317	D32053	Genbank	2366751
Sequence 14318	D38112	Genbank	644480
Sequence 14319	D38524	Genbank	633070
Sequence 14320	D42041	Genbank	577294
Sequence 14321	D42063	Genbank	924266
Sequence 14322	D49489	Genbank	1136742
Sequence 14323	D50420	Genbank	2618577
Sequence 14324	D50525	Genbank	1167502
Sequence 14325	D50916	Genbank	1469174
Sequence 14326	D50929	Genbank	1469200
Sequence 14327	D55673	Genbank	870746
Sequence 14328	D63486	Genbank	1469885
Sequence 14329	D63880	Genbank	961451
Sequence 14330	D64015	Genbank	2281005
Sequence 14331	D79205	Genbank	1754620
Sequence 14332	D79986	Genbank	1136389
Sequence 14333	D80000	Genbank	1136415
Sequence 14334	D83004	Genbank	1181557
Sequence 14335	D84273	Genbank	3894217
Sequence 14336	D86962	Genbank	1503997
Sequence 14337	D86985	Genbank	6634002
Sequence 14338	D87003	Genbank	2114242
Sequence 14339	D87127	Genbank	1817551
Sequence 14340	D87328	Genbank	1813423
Sequence 14341	D87666	Genbank	1620016
Sequence 14342	D87684	Genbank	1663703
Sequence 14343	D90209	Genbank	220087
Sequence 14344	E00882	Genbank	2169143
Sequence 14345	E01094	Genbank	2169353
Sequence 14346	E01533	Genbank	2169789
Sequence 14347	E01932	Genbank	2170180
Sequence 14348	E01954	Genbank	2170202
Sequence 14349	E01979	Genbank	2170227
Sequence 14350	E02164	Genbank	2170402
Sequence 14351	E02628	Genbank	2170856
Sequence 14352	E05647	Genbank	2173834
Sequence 14353	E05957	Genbank	2174144
Sequence 14354	E08663	Genbank	2176776
Sequence 14355	E12274	Genbank	3251108
Sequence 14356	E12457	Genbank	3251290
Sequence 14357	E12651	Genbank	3251483
Sequence 14358	E13330	Genbank	3252135
Sequence 14359	E13405	Genbank	3252210
Sequence 14360	J00139	Genbank	182715
Sequence 14361	J01415	Genbank	1944628
Sequence 14362	J02642	Genbank	182862
Sequence 14363	J02960	Genbank	178203
Sequence 14364	J03248	Genbank	183053
Sequence 14365	J03459	Genbank	187172

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Sequence 14366	J03537	Genbank	337513
Sequence 14367	J03592	Genbank	339722
Sequence 14368	J03746	Genbank	183655
Sequence 14369	J03779	Genbank	179833
Sequence 14370	J03934	Genbank	189245
Sequence 14371	J04173	Genbank	551173
Sequence 14372	J04801	Genbank	190371
Sequence 14373	J04991	Genbank	189425
Sequence 14374	J05633	Genbank	186504
Sequence 14375	K00558	Genbank	340020
Sequence 14376	K03432	Genbank	337377
Sequence 14377	L01042	Genbank	184097
Sequence 14378	L01057	Genbank	292462
Sequence 14379	L02320	Genbank	307365
Sequence 14380	L05094	Genbank	388033
Sequence 14381	L05491	Genbank	292831
Sequence 14382	L05628	Genbank	1835658
Sequence 14383	L06498	Genbank	292442
Sequence 14384	L07287	Genbank	292434
Sequence 14385	L07633	Genbank	186512
Sequence 14386	L08048	Genbank	184250
Sequence 14387	L08441	Genbank	179295
Sequence 14388	L09054	Genbank	307344
Sequence 14389	L10284	Genbank	186522
Sequence 14390	L10612	Genbank	402701
Sequence 14391	L11066	Genbank	307322
Sequence 14392	L11370	Genbank	387674
Sequence 14393	L12136	Genbank	181536
Sequence 14394	L12387	Genbank	459835
Sequence 14395	L12711	Genbank	388890
Sequence 14396	L13278	Genbank	292414
Sequence 14397	L14778	Genbank	306476
Sequence 14398	L19185	Genbank	440307
Sequence 14399	L19437	Genbank	4995970
Sequence 14400	L19739	Genbank	431318
Sequence 14401	L19783	Genbank	404725
Sequence 14402	L20046	Genbank	306741
Sequence 14403	L20941	Genbank	507251
Sequence 14404	L22569	Genbank	348706
Sequence 14405	L24444	Genbank	495860
Sequence 14406	L25931	Genbank	438638
Sequence 14407	L28809	Genbank	454151
Sequence 14408	L28997	Genbank	607027
Sequence 14409	L29766	Genbank	537525
Sequence 14410	L31610	Genbank	1220360
Sequence 14411	L37127	Genbank	4164098
Sequence 14412	L38995	Genbank	704415
Sequence 14413	L39320	Genbank	1226044
Sequence 14414	L39326	Genbank	1228094
Sequence 14415	L40396	Genbank	887357
Sequence 14416	L43575	Genbank	899064
Sequence 14417	L43964	Genbank	951202
Sequence 14418	L44140	Genbank	1203968
Sequence 14419	L47162	Genbank	1082035
Sequence 14420	L47647	Genbank	1000861
Sequence 14421	L76159	Genbank	1246232

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Sequence 14422	L76416	Genbank	5566605
Sequence 14423	M10036	Genbank	339840
Sequence 14424	M11146	Genbank	182504
Sequence 14425	M11147	Genbank	182513
Sequence 14426	M11353	Genbank	184092
Sequence 14427	M12623	Genbank	184233
Sequence 14428	M15205	Genbank	339718
Sequence 14429	M15796	Genbank	181271
Sequence 14430	M16541	Genbank	1280204
Sequence 14431	M17886	Genbank	190233
Sequence 14432	M18048	Genbank	337699
Sequence 14433	M19997	Genbank	181968
Sequence 14434	M21142	Genbank	183402
Sequence 14435	M21575	Genbank	1311702
Sequence 14436	M21895	Genbank	189523
Sequence 14437	M22760	Genbank	695359
Sequence 14438	M22918	Genbank	189019
Sequence 14439	M22920	Genbank	189021
Sequence 14440	M23410	Genbank	762884
Sequence 14441	M24070	Genbank	181485
Sequence 14442	M24194	Genbank	187701
Sequence 14443	M24486	Genbank	190785
Sequence 14444	M24543	Genbank	341200
Sequence 14445	M24690	Genbank	341218
Sequence 14446	M26481	Genbank	619789
Sequence 14447	M26663	Genbank	618463
Sequence 14448	M29064	Genbank	337452
Sequence 14449	M29960	Genbank	339886
Sequence 14450	M31468	Genbank	190876
Sequence 14451	M31520	Genbank	337504
Sequence 14452	M36341	Genbank	178984
Sequence 14453	M36981	Genbank	189239
Sequence 14454	M37104	Genbank	179274
Sequence 14455	M37583	Genbank	184059
Sequence 14456	M38188	Genbank	189378
Sequence 14457	M55150	Genbank	182392
Sequence 14458	M55409	Genbank	189596
Sequence 14459	M58485	Genbank	180154
Sequence 14460	M60457	Genbank	181249
Sequence 14461	M60484	Genbank	190225
Sequence 14462	M60756	Genbank	184085
Sequence 14463	M60857	Genbank	181334
Sequence 14464	M61764	Genbank	183702
Sequence 14465	M63180	Genbank	339679
Sequence 14466	M73547	Genbank	190161
Sequence 14467	M74775	Genbank	187151
Sequence 14468	M75099	Genbank	337369
Sequence 14469	M76299	Genbank	188778
Sequence 14470	M77232	Genbank	307392
Sequence 14471	M86181	Genbank	190566
Sequence 14472	M87339	Genbank	1498255
Sequence 14473	M88006	Genbank	178522
Sequence 14474	M88468	Genbank	307197
Sequence 14475	M90357	Genbank	179577
Sequence 14476	M93036	Genbank	182904
Sequence 14477	M93651	Genbank	338038

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Sequence 14478	M94556	Genbank	188855
Sequence 14479	M96982	Genbank	338262
Sequence 14480	S48220	Genbank	257451
Sequence 14481	S54761	Genbank	265221
Sequence 14482	S72871	Genbank	639594
Sequence 14483	S73498	Genbank	688010
Sequence 14484	S73591	Genbank	688296
Sequence 14485	S74678	Genbank	241477
Sequence 14486	S81752	Genbank	1438780
Sequence 14487	S82597	Genbank	1699343
Sequence 14488	S82616	Genbank	1699307
Sequence 14489	U00238	Genbank	404860
Sequence 14490	U02031	Genbank	451329
Sequence 14491	U03886	Genbank	458225
Sequence 14492	U07231	Genbank	517195
Sequence 14493	U07857	Genbank	469048
Sequence 14494	U09466	Genbank	495492
Sequence 14495	U09813	Genbank	1008454
Sequence 14496	U10248	Genbank	984280
Sequence 14497	U10362	Genbank	505651
Sequence 14498	U12404	Genbank	531170
Sequence 14499	U12465	Genbank	562073
Sequence 14500	U12897	Genbank	562075
Sequence 14501	U13616	Genbank	608024
Sequence 14502	U14193	Genbank	555899
Sequence 14503	U14970	Genbank	550020
Sequence 14504	U14972	Genbank	550024
Sequence 14505	U14973	Genbank	550026
Sequence 14506	U17899	Genbank	717053
Sequence 14507	U18321	Genbank	603763
Sequence 14508	U18671	Genbank	1293919
Sequence 14509	U20285	Genbank	644878
Sequence 14510	U20362	Genbank	755485
Sequence 14511	U25182	Genbank	799380
Sequence 14512	U29171	Genbank	881618
Sequence 14513	U29589	Genbank	903978
Sequence 14514	U30826	Genbank	1049079
Sequence 14515	U34683	Genbank	1236349
Sequence 14516	U39817	Genbank	1072121
Sequence 14517	U41060	Genbank	1256000
Sequence 14518	U41195	Genbank	1244694
Sequence 14519	U41448	Genbank	3335023
Sequence 14520	U41668	Genbank	1477481
Sequence 14521	U44798	Genbank	1174216
Sequence 14522	U46751	Genbank	3077821
Sequence 14523	U49245	Genbank	1216503
Sequence 14524	U51559	Genbank	1236709
Sequence 14525	U52111	Genbank	8331754
Sequence 14526	U52852	Genbank	8370402
Sequence 14527	U54993	Genbank	4097314
Sequence 14528	U56833	Genbank	1465750
Sequence 14529	U57846	Genbank	1373418
Sequence 14530	U57847	Genbank	1373420
Sequence 14531	U59911	Genbank	1403712
Sequence 14532	U66243	Genbank	1772645
Sequence 14533	U66589	Genbank	1575566

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Sequence 14534	U67243	Genbank	2228516
Sequence 14535	U68566	Genbank	1916621
Sequence 14536	U68758	Genbank	4097815
Sequence 14537	U72648	Genbank	3914602
Sequence 14538	U73168	Genbank	1613899
Sequence 14539	U73645	Genbank	1737200
Sequence 14540	U73824	Genbank	1857236
Sequence 14541	U75285	Genbank	2315862
Sequence 14542	U76549	Genbank	1673574
Sequence 14543	U76669	Genbank	6672211
Sequence 14544	U77643	Genbank	2062390
Sequence 14545	U80017	Genbank	1737211
Sequence 14546	U80460	Genbank	2341006
Sequence 14547	U85625	Genbank	5091494
Sequence 14548	U87460	Genbank	2076881
Sequence 14549	U90904	Genbank	1913882
Sequence 14550	U90907	Genbank	1913886
Sequence 14551	U91327	Genbank	1871209
Sequence 14552	U91328	Genbank	2088550
Sequence 14553	U94586	Genbank	1946691
Sequence 14554	U95689	Genbank	2804669
Sequence 14555	U96629	Genbank	2341008
Sequence 14556	V00478	Genbank	28244
Sequence 14557	V00662	Genbank	13003
Sequence 14558	X00351	Genbank	28251
Sequence 14559	X02152	Genbank	34312
Sequence 14560	X03083	Genbank	34309
Sequence 14561	X03205	Genbank	36162
Sequence 14562	X05276	Genbank	37201
Sequence 14563	X05332	Genbank	35740
Sequence 14564	X05857	Genbank	31988
Sequence 14565	X06409	Genbank	30204
Sequence 14566	X14608	Genbank	296365
Sequence 14567	X15822	Genbank	30146
Sequence 14568	X15940	Genbank	36129
Sequence 14569	X16135	Genbank	32355
Sequence 14570	X16560	Genbank	30154
Sequence 14571	X17025	Genbank	488749
Sequence 14572	X17620	Genbank	35067
Sequence 14573	X52839	Genbank	36125
Sequence 14574	X52851	Genbank	30167
Sequence 14575	X52882	Genbank	311380
Sequence 14576	X52897	Genbank	24484
Sequence 14577	X52943	Genbank	28912
Sequence 14578	X56932	Genbank	23690
Sequence 14579	X56998	Genbank	37564
Sequence 14580	X58288	Genbank	32455
Sequence 14581	X59434	Genbank	432375
Sequence 14582	X60221	Genbank	509290
Sequence 14583	X61755	Genbank	32387
Sequence 14584	X63432	Genbank	28335
Sequence 14585	X63657	Genbank	296185
Sequence 14586	X64123	Genbank	35819
Sequence 14587	X65923	Genbank	31302
Sequence 14588	X66975	Genbank	32353
Sequence 14589	X67247	Genbank	36149

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Sequence 14590	X67698	Genbank	37476
Sequence 14591	X69910	Genbank	297407
Sequence 14592	X70940	Genbank	38455
Sequence 14593	X71428	Genbank	393415
Sequence 14594	X72841	Genbank	297903
Sequence 14595	X74801	Genbank	671526
Sequence 14596	X74979	Genbank	400462
Sequence 14597	X75593	Genbank	452319
Sequence 14598	X75684	Genbank	429092
Sequence 14599	X75861	Genbank	456258
Sequence 14600	X76013	Genbank	531595
Sequence 14601	X78137	Genbank	460770
Sequence 14602	X80200	Genbank	951276
Sequence 14603	X81713	Genbank	558213
Sequence 14604	X81788	Genbank	1045058
Sequence 14605	X81895	Genbank	2370158
Sequence 14606	X81900	Genbank	2274973
Sequence 14607	X84908	Genbank	1502344
Sequence 14608	X85372	Genbank	806563
Sequence 14609	X87241	Genbank	1107686
Sequence 14610	X87344	Genbank	1054740
Sequence 14611	X87949	Genbank	1143491
Sequence 14612	X91249	Genbank	1160185
Sequence 14613	X93036	Genbank	1085025
Sequence 14614	X94910	Genbank	3413292
Sequence 14615	X95592	Genbank	1185118
Sequence 14616	X96586	Genbank	1556398
Sequence 14617	X97544	Genbank	1770563
Sequence 14618	X98356	Genbank	1648869
Sequence 14619	X99585	Genbank	1770518
Sequence 14620	Y00052	Genbank	30308
Sequence 14621	Y00282	Genbank	36048
Sequence 14622	Y00345	Genbank	35569
Sequence 14623	Y00815	Genbank	34266
Sequence 14624	Y08201	Genbank	1552548
Sequence 14625	Y09836	Genbank	1743253
Sequence 14626	Y10345	Genbank	2292905
Sequence 14627	Y15286	Genbank	2584788
Sequence 14628	Z11692	Genbank	31107
Sequence 14629	Z11793	Genbank	36425
Sequence 14630	Z13009	Genbank	31072
Sequence 14631	Z14244	Genbank	30150
Sequence 14632	Z21507	Genbank	38521
Sequence 14633	Z24724	Genbank	505034
Sequence 14634	Z25749	Genbank	550116
Sequence 14635	Z31695	Genbank	469143
Sequence 14636	Z36832	Genbank	533946
Sequence 14637	Z36849	Genbank	533963
Sequence 14638	Z46973	Genbank	987947
Sequence 14639	Z47087	Genbank	860989
Sequence 14640	Z48950	Genbank	761715
Sequence 14641	Z54246	Genbank	1000700
Sequence 14642	Z68164	Genbank	1107692
Sequence 14643	Z68284	Genbank	1130698
Sequence 14644	Z69711	Genbank	1204109
Sequence 14645	Z69890	Genbank	1213361

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Sequence 14646	Z73900	Genbank	1340069
Sequence 14647	Z82242	Genbank	1841915
Sequence 14648	Z82975	Genbank	1673497
Sequence 14649	Z84474	Genbank	1903188
Sequence 14650	Z84812	Genbank	1845164
Sequence 14651	Z85986	Genbank	4034056
Sequence 14652	Z92544	Genbank	1869775
Sequence 14653	Z92845	Genbank	2462406
Sequence 14654	Z93041	Genbank	1905788
Sequence 14655	Z93928	Genbank	2578051
Sequence 14656	Z95113	Genbank	6572188
Sequence 14657	Z95126	Genbank	2342581
Sequence 14658	Z95704	Genbank	2121307
Sequence 14659	Z97053	Genbank	9650676
Sequence 14660	Z97054	Genbank	2370077
Sequence 14661	Z97056	Genbank	2832593
Sequence 14662	Z97353	Genbank	4455632
Sequence 14663	Z97652	Genbank	6456822
Sequence 14664	Z98049	Genbank	2462401
Sequence 14665	Z98749	Genbank	4775611
Sequence 14666	Z98884	Genbank	5304861
Sequence 14667	Z98950	Genbank	3036783
Sequence 14668	Z99128	Genbank	3135974
Sequence 14669	Z99916	Genbank	4158122
Sequence 14670	AA004759	EST	1448327
Sequence 14671	AA007319	EST	1463464
Sequence 14672	AA009421	EST	1470619
Sequence 14673	AA009598	EST	1470757
Sequence 14674	AA010071	EST	1471099
Sequence 14675	AA010798	EST	1471844
Sequence 14676	AA011369	EST	1472466
Sequence 14677	AA011539	EST	1472565
Sequence 14678	AA011569	EST	1472595
Sequence 14679	AA013065	EST	1474101
Sequence 14680	AA018720	EST	1481994
Sequence 14681	AA019036	EST	1482627
Sequence 14682	AA019504	EST	1482187
Sequence 14683	AA020851	EST	1484622
Sequence 14684	AA021306	EST	1484995
Sequence 14685	AA024597	EST	1489502
Sequence 14686	AA025057	EST	1489962
Sequence 14687	AA025122	EST	1490037
Sequence 14688	AA026215	EST	1492901
Sequence 14689	AA026316	EST	1492253
Sequence 14690	AA026353	EST	1492674
Sequence 14691	AA026643	EST	1492801
Sequence 14692	AA026758	EST	1492556
Sequence 14693	AA027229	EST	1492149
Sequence 14694	AA029679	EST	1497082
Sequence 14695	AA034414	EST	1506241
Sequence 14696	AA035260	EST	1506772
Sequence 14697	AA035377	EST	1507101
Sequence 14698	AA037143	EST	1512251
Sequence 14699	AA039589	EST	1516014
Sequence 14700	AA039683	EST	1516155
Sequence 14701	AA039734	EST	1516236

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Sequence 14702	AA039876	EST	1516172
Sequence 14703	AA039929	EST	1516206
Sequence 14704	AA040404	EST	1516765
Sequence 14705	AA043048	EST	1522583
Sequence 14706	AA043193	EST	1521111
Sequence 14707	AA043606	EST	1521472
Sequence 14708	AA044663	EST	1523043
Sequence 14709	AA044835	EST	1523038
Sequence 14710	AA046542	EST	1524439
Sequence 14711	AA046810	EST	1524915
Sequence 14712	AA046864	EST	1524763
Sequence 14713	AA047046	EST	1524944
Sequence 14714	AA053607	EST	1544534
Sequence 14715	AA053853	EST	1544797
Sequence 14716	AA053926	EST	1544870
Sequence 14717	AA053942	EST	1545004
Sequence 14718	AA054471	EST	1545396
Sequence 14719	AA056107	EST	1548444
Sequence 14720	AA057352	EST	1549991
Sequence 14721	AA057541	EST	1550246
Sequence 14722	AA057559	EST	1550199
Sequence 14723	AA063079	EST	1556632
Sequence 14724	AA063612	EST	1557579
Sequence 14725	AA065328	EST	1929208
Sequence 14726	AA069023	EST	1576401
Sequence 14727	AA069422	EST	1576781
Sequence 14728	AA069655	EST	1577014
Sequence 14729	AA070277	EST	1577637
Sequence 14730	AA070855	EST	1578487
Sequence 14731	AA071269	EST	1578757
Sequence 14732	AA071402	EST	1578773
Sequence 14733	AA071472	EST	1578903
Sequence 14734	AA074221	EST	1614090
Sequence 14735	AA074611	EST	1614677
Sequence 14736	AA074614	EST	1614492
Sequence 14737	AA074664	EST	1614608
Sequence 14738	AA074831	EST	1614875
Sequence 14739	AA075200	EST	1615070
Sequence 14740	AA075981	EST	1615850
Sequence 14741	AA079050	EST	1617942
Sequence 14742	AA081478	EST	1623536
Sequence 14743	AA082545	EST	1624602
Sequence 14744	AA083712	EST	1625772
Sequence 14745	AA084678	EST	1626735
Sequence 14746	AA084868	EST	1626988
Sequence 14747	AA088189	EST	1633764
Sequence 14748	AA090105	EST	1636589
Sequence 14749	AA092310	EST	1637531
Sequence 14750	AA092324	EST	1637545
Sequence 14751	AA098978	EST	1644862
Sequence 14752	AA099015	EST	1644895
Sequence 14753	AA099080	EST	1645522
Sequence 14754	AA099327	EST	1646033
Sequence 14755	AA100639	EST	1646940
Sequence 14756	AA101116	EST	1647692
Sequence 14757	AA101598	EST	1648552



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Sequence 14758	AA101663	EST	1648744
Sequence 14759	AA102442	EST	1647356
Sequence 14760	AA102560	EST	1647752
Sequence 14761	AA114042	EST	1667919
Sequence 14762	AA115474	EST	1670145
Sequence 14763	AA126478	EST	1686071
Sequence 14764	AA126762	EST	1686262
Sequence 14765	AA126841	EST	1686323
Sequence 14766	AA127483	EST	1686755
Sequence 14767	AA127550	EST	1686822
Sequence 14768	AA127886	EST	1687193
Sequence 14769	AA129205	EST	1688990
Sequence 14770	AA129465	EST	1689336
Sequence 14771	AA129935	EST	1689511
Sequence 14772	AA131336	EST	1692834
Sequence 14773	AA132089	EST	1693579
Sequence 14774	AA132394	EST	1693885
Sequence 14775	AA132989	EST	1694505
Sequence 14776	AA133031	EST	1694539
Sequence 14777	AA133736	EST	1690768
Sequence 14778	AA133759	EST	1690727
Sequence 14779	AA134263	EST	1691637
Sequence 14780	AA134609	EST	1695597
Sequence 14781	AA135030	EST	1696141
Sequence 14782	AA135126	EST	1696227
Sequence 14783	AA135254	EST	1696373
Sequence 14784	AA136337	EST	1697545
Sequence 14785	AA136723	EST	1697933
Sequence 14786	AA136761	EST	1698008
Sequence 14787	AA137016	EST	1698225
Sequence 14788	AA142942	EST	1712320
Sequence 14789	AA143324	EST	1712695
Sequence 14790	AA143422	EST	1712852
Sequence 14791	AA147059	EST	1716433
Sequence 14792	AA147948	EST	1717455
Sequence 14793	AA148889	EST	1718998
Sequence 14794	AA149404	EST	1719920
Sequence 14795	AA149518	EST	1720336
Sequence 14796	AA149579	EST	1720380
Sequence 14797	AA149801	EST	1720899
Sequence 14798	AA149826	EST	1720961
Sequence 14799	AA150361	EST	1721873
Sequence 14800	AA150481	EST	1721995
Sequence 14801	AA151140	EST	1719383
Sequence 14802	AA151423	EST	1719820
Sequence 14803	AA151795	EST	1720490
Sequence 14804	AA151809	EST	1720504
Sequence 14805	AA151816	EST	1720511
Sequence 14806	AA152179	EST	1721231
Sequence 14807	AA155999	EST	1727666
Sequence 14808	AA156226	EST	1727844
Sequence 14809	AA158153	EST	1732990
Sequence 14810	AA158669	EST	1733480
Sequence 14811	AA158704	EST	1733533
Sequence 14812	AA159176	EST	1733969
Sequence 14813	AA159347	EST	1734149

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Sequence 14814	AA160666	EST	1736043
Sequence 14815	AA161467	EST	1735906
Sequence 14816	AA165437	EST	1741453
Sequence 14817	AA166691	EST	1745155
Sequence 14818	AA166843	EST	1745024
Sequence 14819	AA166946	EST	1745322
Sequence 14820	AA167011	EST	1745386
Sequence 14821	AA167501	EST	1745886
Sequence 14822	AA169786	EST	1748121
Sequence 14823	AA171706	EST	1750791
Sequence 14824	AA173421	EST	1753550
Sequence 14825	AA173705	EST	1753883
Sequence 14826	AA173936	EST	1754068
Sequence 14827	AA176244	EST	1757375
Sequence 14828	AA176455	EST	1757713
Sequence 14829	AA178955	EST	1760308
Sequence 14830	AA179220	EST	1760572
Sequence 14831	AA181891	EST	1765368
Sequence 14832	AA182751	EST	1766581
Sequence 14833	AA182940	EST	1766108
Sequence 14834	AA186328	EST	1774446
Sequence 14835	AA186811	EST	1775103
Sequence 14836	AA190408	EST	1779239
Sequence 14837	AA192099	EST	1781923
Sequence 14838	AA192347	EST	1781585
Sequence 14839	AA194517	EST	1784213
Sequence 14840	AA195093	EST	1784783
Sequence 14841	AA203477	EST	1799204
Sequence 14842	AA204856	EST	1802881
Sequence 14843	AA205970	EST	1801341
Sequence 14844	AA206446	EST	1801826
Sequence 14845	AA206761	EST	1802148
Sequence 14846	AA210909	EST	1809555
Sequence 14847	AA214548	EST	1813173
Sequence 14848	AA215640	EST	1815385
Sequence 14849	AA216047	EST	1816018
Sequence 14850	AA216061	EST	1816048
Sequence 14851	AA219137	EST	1833202
Sequence 14852	AA220941	EST	1839687
Sequence 14853	AA223990	EST	1844515
Sequence 14854	AA224985	EST	1846276
Sequence 14855	AA225438	EST	1846765
Sequence 14856	AA225485	EST	1846812
Sequence 14857	AA225653	EST	1846970
Sequence 14858	AA225814	EST	1847200
Sequence 14859	AA226768	EST	1848466
Sequence 14860	AA227285	EST	1848839
Sequence 14861	AA229713	EST	1851876
Sequence 14862	AA232183	EST	1855538
Sequence 14863	AA235835	EST	1860273
Sequence 14864	AA243394	EST	1874187
Sequence 14865	AA243646	EST	1874456
Sequence 14866	AA243774	EST	1874594
Sequence 14867	AA244401	EST	1875185
Sequence 14868	AA247569	EST	1879338
Sequence 14869	AA251128	EST	1886090

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Sequence 14870	AA252998	EST	1882921
Sequence 14871	AA257006	EST	1891135
Sequence 14872	AA258030	EST	1894480
Sequence 14873	AA258271	EST	1893453
Sequence 14874	AA258394	EST	1893536
Sequence 14875	AA261894	EST	1897728
Sequence 14876	AA261960	EST	1898149
Sequence 14877	AA262181	EST	1898452
Sequence 14878	AA262425	EST	1897921
Sequence 14879	AA262871	EST	1898592
Sequence 14880	AA263047	EST	1898845
Sequence 14881	AA278243	EST	1920183
Sequence 14882	AA278787	EST	1920108
Sequence 14883	AA279139	EST	1920605
Sequence 14884	AA279421	EST	1920886
Sequence 14885	AA280206	EST	1921881
Sequence 14886	AA280658	EST	1923453
Sequence 14887	AA280848	EST	1923546
Sequence 14888	AA282253	EST	1925187
Sequence 14889	AA285040	EST	1927721
Sequence 14890	AA285126	EST	1928107
Sequence 14891	AA292069	EST	1940055
Sequence 14892	AA292296	EST	1940276
Sequence 14893	AA294863	EST	1947208
Sequence 14894	AA295158	EST	1947513
Sequence 14895	AA296277	EST	1948652
Sequence 14896	AA296690	EST	1949182
Sequence 14897	AA297999	EST	1950582
Sequence 14898	AA300796	EST	1953128
Sequence 14899	AA303856	EST	1956421
Sequence 14900	AA304244	EST	1956597
Sequence 14901	AA304272	EST	1956615
Sequence 14902	AA305667	EST	1958242
Sequence 14903	AA306121	EST	1958449
Sequence 14904	AA306470	EST	1958798
Sequence 14905	AA307154	EST	1959482
Sequence 14906	AA307818	EST	1960145
Sequence 14907	AA308297	EST	1960626
Sequence 14908	AA308596	EST	1961163
Sequence 14909	AA311749	EST	1964076
Sequence 14910	AA313317	EST	1965646
Sequence 14911	AA313802	EST	1966131
Sequence 14912	AA314008	EST	1966337
Sequence 14913	AA314493	EST	1966822
Sequence 14914	AA314869	EST	1967218
Sequence 14915	AA315072	EST	1967411
Sequence 14916	AA315192	EST	1967541
Sequence 14917	AA316110	EST	1968439
Sequence 14918	AA316272	EST	1968601
Sequence 14919	AA316868	EST	1969196
Sequence 14920	AA317537	EST	1969886
Sequence 14921	AA318361	EST	1970709
Sequence 14922	AA319855	EST	1972181
Sequence 14923	AA325081	EST	1977579
Sequence 14924	AA328973	EST	1981216
Sequence 14925	AA329553	EST	1982040

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Sequence 14926	AA334936	EST	1987254
Sequence 14927	AA339220	EST	1991456
Sequence 14928	AA341254	EST	1993491
Sequence 14929	AA342547	EST	1994804
Sequence 14930	AA343888	EST	1996146
Sequence 14931	AA348129	EST	2000440
Sequence 14932	AA355326	EST	2007708
Sequence 14933	AA359995	EST	2012346
Sequence 14934	AA362311	EST	2014781
Sequence 14935	AA362547	EST	2014916
Sequence 14936	AA363030	EST	2015589
Sequence 14937	AA363971	EST	2016289
Sequence 14938	AA364506	EST	2016845
Sequence 14939	AA371595	EST	2024137
Sequence 14940	AA371677	EST	2024220
Sequence 14941	AA371861	EST	2024387
Sequence 14942	AA376859	EST	2029176
Sequence 14943	AA377534	EST	2029863
Sequence 14944	AA378981	EST	2031371
Sequence 14945	AA379089	EST	2031419
Sequence 14946	AA382161	EST	2034479
Sequence 14947	AA382953	EST	2035271
Sequence 14948	AA393055	EST	2046151
Sequence 14949	AA393236	EST	2046205
Sequence 14950	AA397442	EST	2050483
Sequence 14951	AA398254	EST	2051363
Sequence 14952	AA400319	EST	2054395
Sequence 14953	AA400551	EST	2054422
Sequence 14954	AA400632	EST	2054503
Sequence 14955	AA401792	EST	2057276
Sequence 14956	AA402613	EST	2056402
Sequence 14957	AA402800	EST	2056553
Sequence 14958	AA404535	EST	2059268
Sequence 14959	AA404961	EST	2063336
Sequence 14960	AA405814	EST	2063797
Sequence 14961	AA406106	EST	2064105
Sequence 14962	AA406543	EST	2064657
Sequence 14963	AA410626	EST	2069851
Sequence 14964	AA411013	EST	2070137
Sequence 14965	AA411736	EST	2069397
Sequence 14966	AA412286	EST	2070857
Sequence 14967	AA412695	EST	2071301
Sequence 14968	AA417129	EST	2077272
Sequence 14969	AA417185	EST	2077292
Sequence 14970	AA418317	EST	2080146
Sequence 14971	AA418533	EST	2080314
Sequence 14972	AA418734	EST	2080535
Sequence 14973	AA419146	EST	2078944
Sequence 14974	AA420564	EST	2094461
Sequence 14975	AA420675	EST	2094553
Sequence 14976	AA420705	EST	2094611
Sequence 14977	AA420873	EST	2094306
Sequence 14978	AA421675	EST	2100533
Sequence 14979	AA422114	EST	2100938
Sequence 14980	AA424037	EST	2103034
Sequence 14981	AA425108	EST	2107178

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Sequence 14982	AA425723	EST	2106443
Sequence 14983	AA426125	EST	2106597
Sequence 14984	AA426618	EST	2107298
Sequence 14985	AA427438	EST	2111308
Sequence 14986	AA427994	EST	2112068
Sequence 14987	AA427999	EST	2112073
Sequence 14988	AA428399	EST	2110228
Sequence 14989	AA431300	EST	2115008
Sequence 14990	AA431320	EST	2115028
Sequence 14991	AA431322	EST	2115030
Sequence 14992	AA431581	EST	2115289
Sequence 14993	AA431812	EST	2115520
Sequence 14994	AA432282	EST	2114670
Sequence 14995	AA434140	EST	2139054
Sequence 14996	AA436116	EST	2141030
Sequence 14997	AA436991	EST	2141905
Sequence 14998	AA437166	EST	2142080
Sequence 14999	AA437224	EST	2142138
Sequence 15000	AA442133	EST	2154011
Sequence 15001	AA443297	EST	2155972
Sequence 15002	AA443762	EST	2156437
Sequence 15003	AA446569	EST	2159234
Sequence 15004	AA447974	EST	2161644
Sequence 15005	AA448292	EST	2161962
Sequence 15006	AA451954	EST	2165623
Sequence 15007	AA453183	EST	2166852
Sequence 15008	AA456223	EST	2179433
Sequence 15009	AA456863	EST	2179583
Sequence 15010	AA458476	EST	2183383
Sequence 15011	AA459991	EST	2184875
Sequence 15012	AA461239	EST	2186359
Sequence 15013	AA461254	EST	2186374
Sequence 15014	AA463447	EST	2188331
Sequence 15015	AA463899	EST	2188783
Sequence 15016	AA464099	EST	2188983
Sequence 15017	AA464353	EST	2189237
Sequence 15018	AA465191	EST	2191358
Sequence 15019	AA465537	EST	2191704
Sequence 15020	AA468049	EST	2194583
Sequence 15021	AA468360	EST	2194894
Sequence 15022	AA470144	EST	2197453
Sequence 15023	AA477119	EST	2205803
Sequence 15024	AA478414	EST	2207048
Sequence 15025	AA478637	EST	2207271
Sequence 15026	AA479488	EST	2208044
Sequence 15027	AA479863	EST	2205749
Sequence 15028	AA479892	EST	2204374
Sequence 15029	AA481045	EST	2210597
Sequence 15030	AA483162	EST	2211975
Sequence 15031	AA483450	EST	2212263
Sequence 15032	AA484155	EST	2212968
Sequence 15033	AA487382	EST	2217546
Sequence 15034	AA487628	EST	2217792
Sequence 15035	AA487671	EST	2217835
Sequence 15036	AA488200	EST	2215631
Sequence 15037	AA488782	EST	2218384

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Sequence 15038	AA492042	EST	2221604
Sequence 15039	AA492143	EST	2221705
Sequence 15040	AA492267	EST	2221829
Sequence 15041	AA492423	EST	2221985
Sequence 15042	AA493364	EST	2223205
Sequence 15043	AA493382	EST	2223223
Sequence 15044	AA493522	EST	2223363
Sequence 15045	AA493624	EST	2223465
Sequence 15046	AA493807	EST	2223648
Sequence 15047	AA496002	EST	2229323
Sequence 15048	AA502198	EST	2237165
Sequence 15049	AA503141	EST	2238108
Sequence 15050	AA503404	EST	2238371
Sequence 15051	AA503941	EST	2238908
Sequence 15052	AA504095	EST	2240255
Sequence 15053	AA504531	EST	2240691
Sequence 15054	AA504703	EST	2240863
Sequence 15055	AA505440	EST	2241577
Sequence 15056	AA506953	EST	2243392
Sequence 15057	AA508597	EST	2246100
Sequence 15058	AA513357	EST	2251769
Sequence 15059	AA513367	EST	2251779
Sequence 15060	AA514331	EST	2253839
Sequence 15061	AA514474	EST	2254074
Sequence 15062	AA514538	EST	2254138
Sequence 15063	AA515736	EST	2255336
Sequence 15064	AA520996	EST	2261539
Sequence 15065	AA521142	EST	2261685
Sequence 15066	AA521353	EST	2261896
Sequence 15067	AA522584	EST	2263296
Sequence 15068	AA523005	EST	2388772
Sequence 15069	AA524825	EST	2265753
Sequence 15070	AA525374	EST	2266302
Sequence 15071	AA525960	EST	2268029
Sequence 15072	AA526186	EST	2268255
Sequence 15073	AA526243	EST	2268312
Sequence 15074	AA526569	EST	2268638
Sequence 15075	AA527150	EST	2269219
Sequence 15076	AA527943	EST	2270012
Sequence 15077	AA528066	EST	2270135
Sequence 15078	AA531276	EST	2273982
Sequence 15079	AA531295	EST	2274001
Sequence 15080	AA532807	EST	2278383
Sequence 15081	AA533483	EST	2277579
Sequence 15082	AA534137	EST	2278153
Sequence 15083	AA534340	EST	2278593
Sequence 15084	AA535571	EST	2279824
Sequence 15085	AA535832	EST	2280085
Sequence 15086	AA541343	EST	2287777
Sequence 15087	AA541537	EST	2287971
Sequence 15088	AA541666	EST	2288100
Sequence 15089	AA548238	EST	2318520
Sequence 15090	AA551141	EST	2321393
Sequence 15091	AA551358	EST	2321610
Sequence 15092	AA551385	EST	2321637
Sequence 15093	AA551581	EST	2321833

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Sequence 15094	AA551709	EST	2321961
Sequence 15095	AA551728	EST	2321980
Sequence 15096	AA551770	EST	2322022
Sequence 15097	AA552169	EST	2322421
Sequence 15098	AA552290	EST	2322542
Sequence 15099	AA554025	EST	2324564
Sequence 15100	AA554718	EST	2325257
Sequence 15101	AA554874	EST	2325413
Sequence 15102	AA555194	EST	2325733
Sequence 15103	AA555326	EST	2325865
Sequence 15104	AA557229	EST	2327706
Sequence 15105	AA557760	EST	2328237
Sequence 15106	AA557768	EST	2328245
Sequence 15107	AA563778	EST	2335417
Sequence 15108	AA566072	EST	2337711
Sequence 15109	AA568232	EST	2341286
Sequence 15110	AA570116	EST	2344096
Sequence 15111	AA570171	EST	2344151
Sequence 15112	AA570649	EST	2344629
Sequence 15113	AA570705	EST	2344685
Sequence 15114	AA573315	EST	2347843
Sequence 15115	AA573354	EST	2347882
Sequence 15116	AA573559	EST	2348087
Sequence 15117	AA575939	EST	2350454
Sequence 15118	AA576506	EST	2354006
Sequence 15119	AA578782	EST	2356966
Sequence 15120	AA579375	EST	2357559
Sequence 15121	AA579617	EST	2357801
Sequence 15122	AA579690	EST	2357874
Sequence 15123	AA579834	EST	2355161
Sequence 15124	AA580489	EST	2355816
Sequence 15125	AA582370	EST	2359730
Sequence 15126	AA586421	EST	2398416
Sequence 15127	AA588541	EST	2401716
Sequence 15128	AA593040	EST	2408802
Sequence 15129	AA595014	EST	2410364
Sequence 15130	AA595339	EST	2410689
Sequence 15131	AA599268	EST	2432893
Sequence 15132	AA599661	EST	2433286
Sequence 15133	AA600340	EST	2433965
Sequence 15134	AA600781	EST	2434406
Sequence 15135	AA602357	EST	2436335
Sequence 15136	AA604839	EST	2445703
Sequence 15137	AA604894	EST	2445758
Sequence 15138	AA608917	EST	2457345
Sequence 15139	AA608990	EST	2457418
Sequence 15140	AA609219	EST	2457647
Sequence 15141	AA613550	EST	2464588
Sequence 15142	AA613637	EST	2464675
Sequence 15143	AA618493	EST	2505698
Sequence 15144	AA620307	EST	2524246
Sequence 15145	AA620465	EST	2524404
Sequence 15146	AA621196	EST	2525135
Sequence 15147	AA622806	EST	2526682
Sequence 15148	AA625155	EST	2537540
Sequence 15149	AA625541	EST	2537928

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Sequence 15150	AA626377	EST	2538764
Sequence 15151	AA626635	EST	2539022
Sequence 15152	AA626658	EST	2539045
Sequence 15153	AA628413	EST	2540800
Sequence 15154	AA629923	EST	2552534
Sequence 15155	AA629979	EST	2552590
Sequence 15156	AA630335	EST	2552946
Sequence 15157	AA631646	EST	2554257
Sequence 15158	AA631803	EST	2554414
Sequence 15159	AA631901	EST	2554512
Sequence 15160	AA632126	EST	2555540
Sequence 15161	AA632225	EST	2555639
Sequence 15162	AA632270	EST	2555684
Sequence 15163	AA632610	EST	2556024
Sequence 15164	AA633438	EST	2555298
Sequence 15165	AA633491	EST	2555351
Sequence 15166	AA634087	EST	2557301
Sequence 15167	AA634119	EST	2557333
Sequence 15168	AA635616	EST	2559458
Sequence 15169	AA639362	EST	2563141
Sequence 15170	AA640626	EST	2565876
Sequence 15171	AA641037	EST	2566287
Sequence 15172	AA641660	EST	2566878
Sequence 15173	AA644009	EST	2569227
Sequence 15174	AA644184	EST	2569402
Sequence 15175	AA648402	EST	2574831
Sequence 15176	AA649327	EST	2575756
Sequence 15177	AA649926	EST	2577254
Sequence 15178	AA649975	EST	2577303
Sequence 15179	AA651721	EST	2583373
Sequence 15180	AA652395	EST	2584047
Sequence 15181	AA659388	EST	2595542
Sequence 15182	AA659693	EST	2595847
Sequence 15183	AA661905	EST	2615996
Sequence 15184	AA662530	EST	2616621
Sequence 15185	AA663778	EST	2617769
Sequence 15186	AA665413	EST	2620026
Sequence 15187	AA669980	EST	2631479
Sequence 15188	AA676967	EST	2657489
Sequence 15189	AA677766	EST	2658288
Sequence 15190	AA679533	EST	2660055
Sequence 15191	AA683488	EST	2670086
Sequence 15192	AA687192	EST	2674397
Sequence 15193	AA687631	EST	2674537
Sequence 15194	AA687667	EST	2674573
Sequence 15195	AA689603	EST	2690530
Sequence 15196	AA699712	EST	2702675
Sequence 15197	AA699807	EST	2702770
Sequence 15198	AA702016	EST	2705129
Sequence 15199	AA702170	EST	2705283
Sequence 15200	AA705025	EST	2714943
Sequence 15201	AA707310	EST	2717228
Sequence 15202	AA708327	EST	2718245
Sequence 15203	AA714016	EST	2726290
Sequence 15204	AA714225	EST	2726499
Sequence 15205	AA716100	EST	2728374



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Sequence 15206	AA716314	EST	2728588
Sequence 15207	AA720680	EST	2736815
Sequence 15208	AA720790	EST	2736925
Sequence 15209	AA721701	EST	2737763
Sequence 15210	AA723194	EST	2740971
Sequence 15211	AA725472	EST	2743179
Sequence 15212	AA725821	EST	2743528
Sequence 15213	AA728892	EST	2750251
Sequence 15214	AA728961	EST	2750320
Sequence 15215	AA729381	EST	2750740
Sequence 15216	AA731128	EST	2752332
Sequence 15217	AA731392	EST	2753548
Sequence 15218	AA731610	EST	2753766
Sequence 15219	AA733210	EST	2775319
Sequence 15220	AA736880	EST	2768114
Sequence 15221	AA742380	EST	2784380
Sequence 15222	AA742661	EST	2782167
Sequence 15223	AA744728	EST	2783492
Sequence 15224	AA744747	EST	2783511
Sequence 15225	AA744963	EST	2783727
Sequence 15226	AA745648	EST	2785634
Sequence 15227	AA746967	EST	2786925
Sequence 15228	AA747290	EST	2787248
Sequence 15229	AA747733	EST	2787691
Sequence 15230	AA749010	EST	2788968
Sequence 15231	AA749335	EST	2789293
Sequence 15232	AA764788	EST	2816026
Sequence 15233	AA765778	EST	2817016
Sequence 15234	AA768205	EST	2819220
Sequence 15235	AA769138	EST	2820376
Sequence 15236	AA769353	EST	2820591
Sequence 15237	AA769538	EST	2820776
Sequence 15238	AA769986	EST	2821224
Sequence 15239	AA770216	EST	2821454
Sequence 15240	AA770613	EST	2821851
Sequence 15241	AA771700	EST	2823483
Sequence 15242	AA774100	EST	2825989
Sequence 15243	AA775415	EST	2834749
Sequence 15244	AA775624	EST	2834958
Sequence 15245	AA778356	EST	2837687
Sequence 15246	AA778660	EST	2837991
Sequence 15247	AA778925	EST	2838256
Sequence 15248	AA779599	EST	2838930
Sequence 15249	AA780299	EST	2839630
Sequence 15250	AA782060	EST	2841391
Sequence 15251	AA782690	EST	2842021
Sequence 15252	AA805264	EST	2874014
Sequence 15253	AA806729	EST	2875479
Sequence 15254	AA807199	EST	2876775
Sequence 15255	AA807824	EST	2877230
Sequence 15256	AA809127	EST	2878533
Sequence 15257	AA810277	EST	2879636
Sequence 15258	AA812398	EST	2882009
Sequence 15259	AA814392	EST	2883988
Sequence 15260	AA814728	EST	2884324
Sequence 15261	AA814888	EST	2884484

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Sequence 15262	AA815422	EST	2885018
Sequence 15263	AA824513	EST	2896535
Sequence 15264	AA825977	EST	2899289
Sequence 15265	AA827758	EST	2901317
Sequence 15266	AA827805	EST	2900168
Sequence 15267	AA827816	EST	2900179
Sequence 15268	AA828002	EST	2900365
Sequence 15269	AA828003	EST	2900366
Sequence 15270	AA828621	EST	2901720
Sequence 15271	AA831926	EST	2905025
Sequence 15272	AA831948	EST	2905047
Sequence 15273	AA832521	EST	2898667
Sequence 15274	AA835059	EST	2908787
Sequence 15275	AA835748	EST	2910067
Sequence 15276	AA835869	EST	2910188
Sequence 15277	AA837128	EST	2912327
Sequence 15278	AA838535	EST	2913334
Sequence 15279	AA843197	EST	2929715
Sequence 15280	AA843523	EST	2930041
Sequence 15281	AA844956	EST	2931407
Sequence 15282	AA846735	EST	2932875
Sequence 15283	AA846756	EST	2932896
Sequence 15284	AA846815	EST	2932955
Sequence 15285	AA853937	EST	2941475
Sequence 15286	AA858162	EST	2946464
Sequence 15287	AA861557	EST	2953697
Sequence 15288	AA863230	EST	2955709
Sequence 15289	AA863232	EST	2955711
Sequence 15290	AA863284	EST	2955763
Sequence 15291	AA864497	EST	2958810
Sequence 15292	AA864573	EST	2958886
Sequence 15293	AA865331	EST	2957607
Sequence 15294	AA865552	EST	2957828
Sequence 15295	AA865871	EST	2958147
Sequence 15296	AA866156	EST	2958432
Sequence 15297	AA868706	EST	2964151
Sequence 15298	AA873173	EST	2969295
Sequence 15299	AA873175	EST	2969297
Sequence 15300	AA877181	EST	2986258
Sequence 15301	AA877762	EST	2986727
Sequence 15302	AA883282	EST	2992812
Sequence 15303	AA885293	EST	2994370
Sequence 15304	AA885297	EST	2994374
Sequence 15305	AA886033	EST	3001141
Sequence 15306	AA887219	EST	3002327
Sequence 15307	AA890345	EST	3017224
Sequence 15308	AA890400	EST	3017279
Sequence 15309	AA890449	EST	3017328
Sequence 15310	AA890476	EST	3017355
Sequence 15311	AA902974	EST	3038097
Sequence 15312	AA905362	EST	3040485
Sequence 15313	AA906350	EST	3041473
Sequence 15314	AA908188	EST	3047593
Sequence 15315	AA913039	EST	3052431
Sequence 15316	AA918610	EST	3058500
Sequence 15317	AA926945	EST	3075842

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Sequence 15374	AI073499	EST	3400143
Sequence 15375	AI078597	EST	3413005
Sequence 15376	AI081106	EST	3417898
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Sequence 15378	AI081478	EST	3418270
Sequence 15379	AI081536	EST	3418328
Sequence 15380	AI084607	EST	3423030
Sequence 15381	AI086937	EST	3425360
Sequence 15382	AI087840	EST	3426873
Sequence 15383	AI089289	EST	3428348
Sequence 15384	AI089629	EST	3428688
Sequence 15385	AI091340	EST	3430399
Sequence 15386	AI091999	EST	3427197
Sequence 15387	AI092232	EST	3431226
Sequence 15388	AI092931	EST	3431907
Sequence 15389	AI093444	EST	3432420
Sequence 15390	AI094174	EST	3433150
Sequence 15391	AI095534	EST	3434510
Sequence 15392	AI095786	EST	3434762
Sequence 15393	AI096685	EST	3446179
Sequence 15394	AI114501	EST	6359846
Sequence 15395	AI114683	EST	6360028
Sequence 15396	AI124954	EST	3593468
Sequence 15397	AI125449	EST	3593963
Sequence 15398	AI125479	EST	3593993
Sequence 15399	AI125915	EST	3594429
Sequence 15400	AI127049	EST	3595563
Sequence 15401	AI127824	EST	3596338
Sequence 15402	AI129324	EST	3597838
Sequence 15403	AI129703	EST	3598217
Sequence 15404	AI129827	EST	3598341
Sequence 15405	AI130744	EST	3600760
Sequence 15406	AI130885	EST	3600901
Sequence 15407	AI132921	EST	6360237
Sequence 15408	AI133690	EST	6361006
Sequence 15409	AI138441	EST	3644413
Sequence 15410	AI139393	EST	3645365
Sequence 15411	AI141041	EST	3648498
Sequence 15412	AI142953	EST	3659312
Sequence 15413	AI143184	EST	3664993
Sequence 15414	AI143226	EST	3665035
Sequence 15415	AI143638	EST	3665447
Sequence 15416	AI143894	EST	3665703
Sequence 15417	AI144216	EST	3666025
Sequence 15418	AI144385	EST	3666194
Sequence 15419	AI146512	EST	3674194
Sequence 15420	AI150844	EST	3679313
Sequence 15421	AI150878	EST	3679347
Sequence 15422	AI159872	EST	3693252
Sequence 15423	AI159999	EST	3693379
Sequence 15424	AI160331	EST	3693711
Sequence 15425	AI160430	EST	3693810
Sequence 15426	AI161162	EST	3694467
Sequence 15427	AI167145	EST	3700315
Sequence 15428	AI167693	EST	3700863
Sequence 15429	AI168090	EST	3701260

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Sequence 15430	AI174394	EST	3721247
Sequence 15431	AI174722	EST	6361100
Sequence 15432	AI174834	EST	6361229
Sequence 15433	AI188128	EST	3739337
Sequence 15434	AI188187	EST	3739396
Sequence 15435	AI188575	EST	3739784
Sequence 15436	AI188768	EST	3739977
Sequence 15437	AI189569	EST	3740778
Sequence 15438	AI191342	EST	3742551
Sequence 15439	AI191933	EST	3743142
Sequence 15440	AI199229	EST	3751835
Sequence 15441	AI201859	EST	3754465
Sequence 15442	AI203123	EST	3755729
Sequence 15443	AI207440	EST	6361448
Sequence 15444	AI207448	EST	6361456
Sequence 15445	AI208443	EST	3770385
Sequence 15446	AI218943	EST	3801146
Sequence 15447	AI222237	EST	3804440
Sequence 15448	AI222424	EST	3804627
Sequence 15449	AI222782	EST	3804985
Sequence 15450	AI222806	EST	3805009
Sequence 15451	AI240909	EST	3836306
Sequence 15452	AI241212	EST	3836609
Sequence 15453	AI241763	EST	3837160
Sequence 15454	AI244187	EST	3839584
Sequence 15455	AI245887	EST	3841284
Sequence 15456	AI246248	EST	3841645
Sequence 15457	AI248623	EST	3844020
Sequence 15458	AI249146	EST	3844543
Sequence 15459	AI249680	EST	3846209
Sequence 15460	AI253055	EST	3849584
Sequence 15461	AI253330	EST	3850451
Sequence 15462	AI253414	EST	3850369
Sequence 15463	AI253609	EST	3858537
Sequence 15464	AI254360	EST	3861885
Sequence 15465	AI261577	EST	3869780
Sequence 15466	AI263373	EST	3871576
Sequence 15467	AI264005	EST	3872208
Sequence 15468	AI264289	EST	3872492
Sequence 15469	AI266408	EST	3884566
Sequence 15470	AI266746	EST	3884904
Sequence 15471	AI267341	EST	3886508
Sequence 15472	AI267471	EST	3886638
Sequence 15473	AI267960	EST	3887127
Sequence 15474	AI268542	EST	3887709
Sequence 15475	AI269537	EST	3888704
Sequence 15476	AI271234	EST	3890401
Sequence 15477	AI271608	EST	3890775
Sequence 15478	AI274628	EST	3896896
Sequence 15479	AI276950	EST	3899218
Sequence 15480	AI278211	EST	3900479
Sequence 15481	AI278317	EST	3900585
Sequence 15482	AI278411	EST	3900679
Sequence 15483	AI278998	EST	3917232
Sequence 15484	AI279500	EST	3917734
Sequence 15485	AI279903	EST	3918137

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Sequence 15486	AI281560	EST	3919793
Sequence 15487	AI282246	EST	3920479
Sequence 15488	AI283100	EST	3921333
Sequence 15489	AI284545	EST	3922778
Sequence 15490	AI284565	EST	3922798
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Sequence 15493	AI290104	EST	3931770
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Sequence 15495	AI291613	EST	3934387
Sequence 15496	AI299384	EST	3959038
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Sequence 15498	AI300346	EST	3959692
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Sequence 15500	AI301294	EST	3960640
Sequence 15501	AI301904	EST	3961250
Sequence 15502	AI305197	EST	3988838
Sequence 15503	AI305516	EST	3990407
Sequence 15504	AI307736	EST	4001954
Sequence 15505	AI311614	EST	4006485
Sequence 15506	AI313335	EST	4018940
Sequence 15507	AI332968	EST	4069527
Sequence 15508	AI332994	EST	4069553
Sequence 15509	AI334291	EST	4070850
Sequence 15510	AI335537	EST	4072464
Sequence 15511	AI339426	EST	4076353
Sequence 15512	AI339635	EST	4076562
Sequence 15513	AI339952	EST	4076879
Sequence 15514	AI341076	EST	4078003
Sequence 15515	AI342005	EST	4078932
Sequence 15516	AI342217	EST	4079144
Sequence 15517	AI342486	EST	4079413
Sequence 15518	AI344424	EST	4081630
Sequence 15519	AI345709	EST	4082915
Sequence 15520	AI347461	EST	4084667
Sequence 15521	AI348001	EST	4085207
Sequence 15522	AI348771	EST	4085989
Sequence 15523	AI349772	EST	4086978
Sequence 15524	AI352497	EST	4089703
Sequence 15525	AI354464	EST	4094617
Sequence 15526	AI356534	EST	4108155
Sequence 15527	AI361046	EST	4112667
Sequence 15528	AI361513	EST	4113134
Sequence 15529	AI362439	EST	4114060
Sequence 15530	AI366870	EST	4136615
Sequence 15531	AI367932	EST	4137677
Sequence 15532	AI368934	EST	4147687
Sequence 15533	AI369035	EST	4147788
Sequence 15534	AI371024	EST	4149777
Sequence 15535	AI371230	EST	4149983
Sequence 15536	AI375148	EST	4175138
Sequence 15537	AI375903	EST	4175893
Sequence 15538	AI376130	EST	4176120
Sequence 15539	AI376380	EST	4186229
Sequence 15540	AI376921	EST	4186774
Sequence 15541	AI377037	EST	4186890

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Sequence 15598	AI565340	EST	4523797
Sequence 15599	AI566010	EST	4524462
Sequence 15600	AI566802	EST	4525254
Sequence 15601	AI567133	EST	4525585
Sequence 15602	AI567453	EST	4525905
Sequence 15603	AI567945	EST	4526397
Sequence 15604	AI569819	EST	4533193
Sequence 15605	AI569945	EST	4533319
Sequence 15606	AI571329	EST	4534703
Sequence 15607	AI571458	EST	4534832
Sequence 15608	AI581200	EST	4565576
Sequence 15609	AI582529	EST	4568426
Sequence 15610	AI582700	EST	4568597
Sequence 15611	AI597662	EST	4606710
Sequence 15612	AI610362	EST	4619529
Sequence 15613	AI619754	EST	4628880
Sequence 15614	AI620259	EST	4629385
Sequence 15615	AI621173	EST	4630299
Sequence 15616	AI624454	EST	4649385
Sequence 15617	AI628617	EST	4665417
Sequence 15618	AI632017	EST	4683347
Sequence 15619	AI632109	EST	4683439
Sequence 15620	AI633086	EST	4684416
Sequence 15621	AI633612	EST	4684942
Sequence 15622	AI634293	EST	4685623
Sequence 15623	AI635449	EST	4686779
Sequence 15624	AI636182	EST	4687512
Sequence 15625	AI636818	EST	4688148
Sequence 15626	AI638334	EST	4690568
Sequence 15627	AI650736	EST	4734715
Sequence 15628	AI651228	EST	4735207
Sequence 15629	AI651423	EST	4735402
Sequence 15630	AI651529	EST	4735508
Sequence 15631	AI652336	EST	4736315
Sequence 15632	AI653693	EST	4737672
Sequence 15633	AI653819	EST	4737798
Sequence 15634	AI654736	EST	4738715
Sequence 15635	AI655590	EST	4739569
Sequence 15636	AI655840	EST	4739819
Sequence 15637	AI659386	EST	4762956
Sequence 15638	AI660901	EST	4764484
Sequence 15639	AI671089	EST	4850820
Sequence 15640	AI673189	EST	4852920
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Sequence 15644	AI677810	EST	4887992
Sequence 15645	AI677876	EST	4888058
Sequence 15646	AI679799	EST	4889981
Sequence 15647	AI680555	EST	4890737
Sequence 15648	AI680742	EST	4890924
Sequence 15649	AI681316	EST	4891498
Sequence 15650	AI683072	EST	4893254
Sequence 15651	AI683117	EST	4893299
Sequence 15652	AI683727	EST	4893909
Sequence 15653	AI689427	EST	4900721

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Sequence 15710	AI961563	EST	5754276
Sequence 15711	AI971397	EST	5768223
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Sequence 15713	AL036349	EST	5405930
Sequence 15714	AL037069	EST	5928030
Sequence 15715	AL037845	EST	5407176
Sequence 15716	AL037978	EST	5407290
Sequence 15717	AL038564	EST	5407750
Sequence 15718	AL039253	EST	5408327
Sequence 15719	AL040602	EST	5409549
Sequence 15720	AL042384	EST	5421723
Sequence 15721	AL046811	EST	5434873
Sequence 15722	AL049135	EST	4728445
Sequence 15723	AL118571	EST	5924470
Sequence 15724	AL120354	EST	5926253
Sequence 15725	AL133982	EST	6602169
Sequence 15726	AL134985	EST	6603172
Sequence 15727	AL138451	EST	6855132
Sequence 15728	AL157600	EST	7058001
Sequence 15729	AW008029	EST	5856807
Sequence 15730	AW008673	EST	5857451
Sequence 15731	AW009152	EST	5857930
Sequence 15732	AW016461	EST	5865218
Sequence 15733	AW020561	EST	5874091
Sequence 15734	AW020914	EST	5874444
Sequence 15735	AW021803	EST	5875333
Sequence 15736	AW022479	EST	5876009
Sequence 15737	AW023580	EST	5877110
Sequence 15738	AW026439	EST	5879969
Sequence 15739	AW026700	EST	5880153
Sequence 15740	AW027717	EST	5886473
Sequence 15741	AW029611	EST	5888367
Sequence 15742	AW051380	EST	5913650
Sequence 15743	AW055331	EST	5921034
Sequence 15744	AW057525	EST	5933164
Sequence 15745	AW062700	EST	6014085
Sequence 15746	AW069166	EST	6024252
Sequence 15747	AW075351	EST	6030349
Sequence 15748	AW079672	EST	6034824
Sequence 15749	AW081110	EST	6036262
Sequence 15750	AW081275	EST	6036427
Sequence 15751	AW083877	EST	6039029
Sequence 15752	AW084353	EST	6039505
Sequence 15753	AW084441	EST	6039593
Sequence 15754	AW085581	EST	6040733
Sequence 15755	AW088099	EST	6043904
Sequence 15756	AW089689	EST	6047033
Sequence 15757	AW102924	EST	6073539
Sequence 15758	AW131444	EST	6133051
Sequence 15759	AW151003	EST	6198901
Sequence 15760	AW151170	EST	6199068
Sequence 15761	AW161328	EST	6300361
Sequence 15762	AW161668	EST	6300701
Sequence 15763	AW166819	EST	6398344
Sequence 15764	AW167129	EST	6398654
Sequence 15765	AW168050	EST	6399575

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Sequence 15766	AW177001	EST	6443038
Sequence 15767	AW183074	EST	6451536
Sequence 15768	AW188081	EST	6462517
Sequence 15769	AW188641	EST	6463001
Sequence 15770	AW188668	EST	6463028
Sequence 15771	AW188775	EST	6463211
Sequence 15772	AW188814	EST	6463250
Sequence 15773	AW190568	EST	6465048
Sequence 15774	AW235964	EST	6568353
Sequence 15775	AW243325	EST	6577165
Sequence 15776	AW243940	EST	6577780
Sequence 15777	AW271299	EST	6658329
Sequence 15778	AW271852	EST	6658882
Sequence 15779	AW273750	EST	6660780
Sequence 15780	AW290969	EST	6697605
Sequence 15781	AW293305	EST	6699867
Sequence 15782	AW293616	EST	6700252
Sequence 15783	AW294158	EST	6700794
Sequence 15784	AW297885	EST	6704510
Sequence 15785	AW328141	EST	6798637
Sequence 15786	AW360820	EST	6865470
Sequence 15787	AW361122	EST	6865772
Sequence 15788	AW365134	EST	6869784
Sequence 15789	AW368376	EST	6873026
Sequence 15790	AW369111	EST	6873761
Sequence 15791	AW378964	EST	6883623
Sequence 15792	AW381285	EST	6885944
Sequence 15793	AW386920	EST	6891579
Sequence 15794	AW390476	EST	6895135
Sequence 15795	AW394098	EST	6898757
Sequence 15796	AW402596	EST	6921298
Sequence 15797	AW449808	EST	6990584
Sequence 15798	AW449890	EST	6990666
Sequence 15799	AW450105	EST	6990881
Sequence 15800	AW450574	EST	6991350
Sequence 15801	AW450748	EST	6991524
Sequence 15802	AW451232	EST	6992008
Sequence 15803	AW451555	EST	6992331
Sequence 15804	AW451783	EST	6992559
Sequence 15805	AW452088	EST	6992864
Sequence 15806	AW452730	EST	6993506
Sequence 15807	AW468168	EST	7038274
Sequence 15808	AW469281	EST	7039387
Sequence 15809	AW470264	EST	7040370
Sequence 15810	AW473121	EST	7043227
Sequence 15811	AW510526	EST	N/A
Sequence 15812	AW511443	EST	N/A
Sequence 15813	AW572897	EST	7237630
Sequence 15814	C00019	EST	1432249
Sequence 15815	C14194	EST	1568901
Sequence 15816	C16523	EST	1571230
Sequence 15817	D53484	EST	955381
Sequence 15818	D61456	EST	970232
Sequence 15819	D61516	EST	970472
Sequence 15820	D81678	EST	1179555
Sequence 15821	F08667	EST	672530



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Sequence 15822	F10548	EST	683206
Sequence 15823	F35428	EST	4821054
Sequence 15824	H19093	EST	885333
Sequence 15825	H22094	EST	890789
Sequence 15826	H22238	EST	890933
Sequence 15827	H39906	EST	915958
Sequence 15828	H47418	EST	923470
Sequence 15829	H52272	EST	992113
Sequence 15830	H52374	EST	992215
Sequence 15831	H54240	EST	994387
Sequence 15832	H64134	EST	1018935
Sequence 15833	H67372	EST	1026112
Sequence 15834	H67494	EST	1026234
Sequence 15835	H77381	EST	1055470
Sequence 15836	H78888	EST	1056977
Sequence 15837	H79965	EST	1058054
Sequence 15838	H81340	EST	1059429
Sequence 15839	H90127	EST	1080557
Sequence 15840	N25954	EST	1140302
Sequence 15841	N43012	EST	1166756
Sequence 15842	N48918	EST	1190084
Sequence 15843	N56877	EST	1200767
Sequence 15844	N62671	EST	1210500
Sequence 15845	N66909	EST	1219034
Sequence 15846	N71827	EST	1228539
Sequence 15847	N95674	EST	1267942
Sequence 15848	N95803	EST	1268098
Sequence 15849	R23565	EST	778453
Sequence 15850	R80268	EST	856549
Sequence 15851	R93800	EST	967966
Sequence 15852	R98534	EST	985051
Sequence 15853	T49212	EST	651072
Sequence 15854	T55511	EST	657372
Sequence 15855	T75284	EST	692046
Sequence 15856	T81310	EST	704195
Sequence 15857	T84643	EST	712995
Sequence 15858	T91068	EST	722981
Sequence 15859	U69567	EST	2731398
Sequence 15860	W02490	EST	1274488
Sequence 15861	W04263	EST	1276162
Sequence 15862	W05733	EST	1278455
Sequence 15863	W19899	EST	1295768
Sequence 15864	W21207	EST	1298239
Sequence 15865	W25889	EST	1306147
Sequence 15866	W58768	EST	1364280
Sequence 15867	W60245	EST	1367175
Sequence 15868	W61046	EST	1367806
Sequence 15869	W79674	EST	1390063
Sequence 15870	Z22018	EST	288765
Sequence 15871	Z40994	EST	566739
Sequence 15872	T00880	NUCPATENT	N/A
Sequence 15873	T19326	NUCPATENT	N/A
Sequence 15874	T27758	NUCPATENT	N/A
Sequence 15875	T48099	NUCPATENT	N/A
Sequence 15876	T92160	NUCPATENT	N/A
Sequence 15877	T96835	NUCPATENT	N/A

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Sequence 15878	V58586	NUCPATENT	N/A
Sequence 15879	V59067	NUCPATENT	N/A
Sequence 15880	V59630	NUCPATENT	N/A
Sequence 15881	V60015	NUCPATENT	N/A
Sequence 15882	V65326	NUCPATENT	N/A
Sequence 15883	V88598	NUCPATENT	N/A
Sequence 15884	V90354	NUCPATENT	N/A
Sequence 15885	X02974	NUCPATENT	N/A
Sequence 15886	X20483	NUCPATENT	N/A
Sequence 15887	X26850	NUCPATENT	N/A
Sequence 15888	X27348	NUCPATENT	N/A
Sequence 15889	X30410	NUCPATENT	N/A
Sequence 15890	X33813	NUCPATENT	N/A
Sequence 15891	X84945	NUCPATENT	N/A
Sequence 15892	X86772	NUCPATENT	N/A
Sequence 15893	X87396	NUCPATENT	N/A
Sequence 15894	X87868	NUCPATENT	N/A
Sequence 15895	X98006	NUCPATENT	N/A
Sequence 15896	X98010	NUCPATENT	N/A
Sequence 15897	X98409	NUCPATENT	N/A
Sequence 15898	X98714	NUCPATENT	N/A
Sequence 15899	Z14927	NUCPATENT	N/A
Sequence 15900	Z16190	NUCPATENT	N/A
Sequence 15901	Z18356	NUCPATENT	N/A
Sequence 15902	Z24811	NUCPATENT	N/A
Sequence 15903	Z29718	NUCPATENT	N/A
Sequence 15904	Z33656	NUCPATENT	N/A
Sequence 15905	Z34089	NUCPATENT	N/A
Sequence 15906	Z41384	NUCPATENT	N/A
Sequence 15907	Z97274	NUCPATENT	N/A
Sequence 15908	AC28082	PREPATNUC	N/A
Sequence 15909	AC34864	PREPATNUC	N/A
Sequence 15910	AC36253	PREPATNUC	N/A
Sequence 15911	AC38032	PREPATNUC	N/A

**Table 3-6**

Sequence 11676: Found in patent publication WO00/05367

AGTACTTCTAGAATTAATTAAGGCGGGCGCCTGCANTCCAGNTACNCGGNAGGCTGAGG  
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CCNGGCCCNCCCNCTGGNGNNTTCCCANATCCCNNTTTTNTGAATTTTTTTNCCCCCCCC  
NNNTGGNCCTGTTTTCTACTAGTGATGATCTGGTAATATACAATTTGTCCAGTAGCCAGT  
TTGTTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGCAAAGCCTGTATGACGCT  
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AATCTTCTGGTCA

Sequence 11677: Found in patent publication WO99/46375

AGTACTTCTAGAATTAATTAAGGCGGGGACACCCTTTTCAAAGGACTTCTTGGTTTCAG  
CATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTGAGAATTCAGCAT  
ATTTAAGGGCATTCTTTGATTCTCAAAGTTGAGCATTCTTTTGAATTGAGAAGCCTA  
TACATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACCTGAACCATTCAAAGGATT  
TTTTTGTAAAACCTGGATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTTCATT  
TCCATAGCTTCTTATCCCTGTATTGAGGTAATAAATTGTTTTACTGACAATTTTTCCTT  
TTCTACACTAAAACAATATGTGATATATTTCCCTCTTGAAGAGGCAATTCATTAACTC

Sequence 11678: Found in patent publication WO98/54206

AGTACTTCTAGAATTAATTAACAGACAATCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
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Sequence 11679: Found in patent publication WO99/63088

AGTACTTCTAGAATTAATTAAGGCGGGGAGTTTTATCTATTCTTTACATTGGATGCAAAA  
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GTTTATTAATAGTTTAAACAATATTCTCTTTTTGAAAATAGTATAAACAGGCCATGCAT  
ATAATGTACAGTGATTACGTAAATATGTAAAGATTCTTCAAGGTAACAAGGGTTTGGGT  
TTTGAATAAACATCTGGATCTTATAGACCGTTCATACAATGGTTTTAGCAAGTTCATAG  
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GACCAGTA

Sequence 11680: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
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TAAAAGGACGTTATGAAAGGGCTTAGACCAAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTATGTAGTTCTTCTGCATGCATTAATAATGTTTAGAA  
ATGCTT

Sequence 13322: Found in patent publication WO00/09552

AGTACTTCTAGAATTAATTAAGGCGGGGTCTAGCTCCTTATTTATCTAAATAAAGTTTTA  
CTGGAA  
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Sequence 13323: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGGAAAGTTAGAGGAACTGAAAGTTTGGGAATAG  
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TCTCCACTGAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13324: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGTCTGGTTAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
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Sequence 13325: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCTGATGCCATTCTCTTTGTATT  
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TTATATAGCTGCTTGGAGAGTCTGTGTAGTTCTTCTGCATGTATTAATAATGTTTAGAA  
A

Sequence 13326: Found in patent publication WO00/06698

GCCCTGGGAAACGATTGTGAACGCNTGAATGAATTGATGACTAANATCCGCTGCGGGGGT  
CCTACAGCGCANATGGTAATGCCCGTTCTGACTGGCTGGGAACGGCACCTTAGCAAGATA  
CTTAAAGGCGCCTTCTGTGTGCCACNTGCACTCCACCCTGGGCAACAGAGCAAANACCC

Table 3-6

CATCTCAAAAATAAATAATATATATAAAAAATAAAAAGCTATTTCTAGTTTNATTTAC  
TATAAAGTTTTGCTTTTATTA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAAACTCCGTGTCTACTAAAAATACAAAAATTGGCTGGGCCGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAAAAAAAAAAAAATAAATAAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTGTTTTACACCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAAATTTAGTCCATTATGATTTTCTT  
TCTCACATAATTACTTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTTAACTAC  
AGCTATCAGCATGGACAAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACCTCAAATGGCATTAAACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCTTAATCGTGGACTCATCTACGTAGAACTAGG  
CCAGTATGGCTTTGCACTAGAGGATTTTAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGNTACTTNCTAGAAATTAATTAAGGGCGGGGNTAGANCAAAAAAAAAATAAAC  
AACAAACAAAAAAAAACNAAAAATANAAAAAAAAAAAAAAAAANNNANNNCAANNNAANTAA  
AAATTNNNTATTTATTTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAGAAA  
AAATAANTAAAAAATTNATAAANAATAAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAAACC  
TTAA  
AA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAA  
AA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAAGACTAAGTTGTCAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTCAACCTTTTAGGC  
TTTGTAAGGAGTTTTGGTTTTCTCCTAATAGCAATGGGATATCTTCAAGGAATCTCAA  
TCAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAAAAAANNGNNNNNNCCNNTNTTTTTTTT

**Table 3-6**

Sequence 11676: Found in patent publication WO00/05367  
AGTACTTCTAGAATTAATTAAGGCGGGCGCCTGCANTCCCAGNTACNCGGNAGGCTGAGG  
CAGGAGAATGGCGTGAACCCANGAGGCGGAGCTTGCAGTGAGCTGAGATCGCGCCACTGC  
NCTCCAGCTGGGCAACAGAGTGAGACTCCGTCCTCCGCTAANAAATNANAAAAANAANN  
CCNGGCCCNCCNCTGGNGNNTTCCANATCCCNNTTTTNTGAATTTTTTNCNCCCCCCC  
NNNTGGNCCTGTTTTCTACTAGTGATGATCTGGTAATATACAATTTGTCCAGTAGCCAGT  
TTGTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGCAAAGCCTGTATGACGCT  
GTACACACACAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAACA  
AATCTTCTGGTCA

Sequence 11677: Found in patent publication WO99/46375  
AGTACTTCTAGAATTAATTAAGGCGGGGACACCACTTTTCAAAGGACTTCTTGGTTTCAG  
CATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTGAGAATTCAGCAT  
ATTTAAGGGCATTCTTTGATTCTCAAAGTTCAGCATTCAATTTGAATTGAGAAGCCTA  
TACATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACCTGAACCATTCAAAGGATT  
TTTTTTGTTTAAACTGGATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTTCATT  
TCCATAGCTTCTTATCCCTGTATTGAGGTAATAAATTGTTTTACTGACAATTTTTCCTTT  
TTCTACATAAAACAATATGTGATATATTTCCCCTCTTGAAGAGGCAATTCATTAAACTC

Sequence 11678: Found in patent publication WO98/54206  
AGTACTTCTAGAATTAATTAACAGACAATTCTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAN

Sequence 11679: Found in patent publication WO99/63088  
AGTACTTCTAGAATTAATTAAGGCGGGGAGTTTTATCTATTCTTTACATTGGATGCAAAA  
TGTATTACTCAAGAAGAGGCATTGCGGTATCGAACCATAGATGAACATGATGCCATCATT  
AAGGAAATCCATGGACCAAGGATGGAATACAGATTGATGCTGCCCTATCAATTAATTTTG  
GTTTATTAATAGTTTAAACAATATTCTTTTTGAAAATAGTATAAACAGGCCATGCAT  
ATAATGTACAGTGATTACGTAAATATGTAAGATTCTTCAAGGTAACAAGGGTTTGGGT  
TTTGAAATAAACATCTGGATCTTATAGACCGTTCATACAATGGTTTTAGCAAGTTCATAG  
TAAGACAAACAAGTCCTATCTTTTTTTTTTTGGCTGGGGTGGGGGCATTGGTCACATAT  
GACCAGTA

Sequence 11680: Found in patent publication WO99/67383  
AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCGTAGCCATTCTCTTTGTATT  
TTAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTATGTAGTTCTTTCTGCATGCATTAATAAATGTTTAGAA  
ATGCTT

Sequence 13322: Found in patent publication WO00/09552  
AGTACTTCTAGAATTAATTAAGGCGGGGTCTAGCTCCTTATTTATCTAAATAAAGTTTTA  
CTGGAAA  
AAAAAAAAANTTAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13323: Found in patent publication WO99/66041  
AGTACTTCTAGAATTAATTAAGGCGGGGAAAGTTAGAGGAACTGAAAGTTTGGGAATAG  
GCTGACCACATATTATGCCAGTGACCAGTATGACAGGAGATGGGGCCCTGCTGCCAGTCA  
TCTCCACTGAATAAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13324: Found in patent publication WO99/66041  
AGTACTTCTAGAATTAATTAAGGCGGTCTGGTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13325: Found in patent publication WO99/67383  
AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCGTAGCCATTCTCTTTGTATT  
TTAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTGTGTAGTTCTTTCTGCATGTATTAAAAATGTTTAGAA  
A

Sequence 13326: Found in patent publication WO00/06698  
GCCCTGGGAAACGATTGTGAACGCNTGAATGAATTGATGACTAANATCCGCTGCGGGGGT  
CCTACAGCGCANATGGTAATGCCGTTCTGACTGGCTGGGAACGGCACCTTAGCAAGATA  
CTTAAAGGCGCCTTCTGTGTGCCACNTGCACTCCACCCTGGGCAACAGAGCAAANACCC

**Table 3-6**

CATCTCAAAAATAAATAATATATATAAAAAATAAAAAGCTATTTCTAGTTTNATTTAC  
TATAAGTTTTGCTTTTATTTAA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAACCTCCGTGTCTACTAAAAATACAAAAATTGGCTGGGCCGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAATAAATAAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTCGTTTTACACCCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAATTTAGTCCATTATGATTTCCTT  
TCTCACATAATTACTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTAACTAC  
AGCTATCAGCATGGACAAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACCTCAAATGGCATTACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCCTTAATCGTGGACTCATCTACGTAGAACTAGG  
CCAGTATGGCTTTGCACTAGAGGATTTTAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGNTACTTNCTAGAAATTAATTAAGGCGGGGNTAGANCAAAAAATAAAAC  
AACAACAAAAAACNAAAAATANAAAAAANAANNANNCANNNAAAAANTAA  
AAATTNNNTATTTATTTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAGAAA  
AAATAANTAAAAAATTNATAAANAATAAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAAAC  
TTAAA  
AAA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAA  
AAA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAAGACTAAGTTGTCAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTGCAACCTTTTAGGC  
TTTGTAAGGAGTTTTGGTTTTCTCCTAATAGCAATGGGATATCTTCCAAGGAATCTCAA  
TCAAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAAAAAANNGNNNNNNCCNNTNTTTTTTTT



Table 3-6

CATCTCAAAAATAAATAAATATATATAAAAAATAAAAAAGCTATTTCTAGTTTNATTTTAC  
TATAAAGTTTTGCTTTTATTAA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAACCTCCGTGTCTACTAAAAATACAAAAATTGGCTGGGCCGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAAAAAAAAAAAAATAAATAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTCGTTTTACACCCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAATTTTCACTCCATTATGATTTTCTT  
TCTCACATAATTACTTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTTAACTAC  
AGCTATCAGCATGGACAAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACCTCAAATGGCATTAAACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCCTTAATCGTGGACTCATCTACGTAGAACTAGG  
CCAGTATGGCTTTGCACTAGAGGATTTTAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGNTACTTNCTAGAAATTAATTAAGGGCGGGGNTAGANCAAAAAAAAAATAAAC  
AACACAAAAAAAAAACNAAAAATANAAAAAAAAAAAAAAAAANNNANNCANNNAAAAANTAA  
AAATTNNNTATTTATTTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAAGAAA  
AAATAANTAATAAATTNATAANAATAAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAACC  
TTAA  
AA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAAAAAA  
AA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAAGACTAACTTGTGAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTCGAACCTTTTAGGC  
TTTGTAAGGAGTTTGGTTTTCTCCTAATAGCAATGGGATATCTTCCAAGGAATCTCAA  
TCAAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAAANNGNNNNNNCCCNNTNTTTTTTTT



Table 3-6

Sequence 11676: Found in patent publication WO00/05367

AGTACTTCTAGAATTAATTAAGGCGGGCGCCTGCANTCCCAGNTACNCGGNAGGCTGAGG  
CAGGAGAATGGCGTGAACCCANGAGGCGGAGCTTGCACTGAGCTGAGATCGCGCCACTGC  
NCTCCAGCCTGGGCAACAGAGTGAGACTCCGTCGCTAANAAATNANAAAAANAANN  
CCNGGCCCNCCNCTGGNGNNTTCCANATCCNNTTTTNTGAATTTTTTTNCCCCCCCC  
NNNTGGNCCTGTTTTCTACTAGTGATGATCTGGTAATATACAATTTGTCCAGTAGCCAGT  
TTGTTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGCAAAGCCTGTATGACGCT  
GTACACACACAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAACA  
AATCTTCTGGTCA

Sequence 11677: Found in patent publication WO99/46375

AGTACTTCTAGAATTAATTAAGGCGGGGACACCACTTTTCAAAGGACTTCTTGGTTTTAG  
CATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTGAGAATCAAGCAT  
ATTTAAGGGCATTCTTTGATTCTCAAAGTTCAGCATTCAATTTGAATTGAGAAGCCTA  
TACATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACCTGAACCATTCAAAGGATT  
TTTTTTGTTTAAACTGGATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTTCATT  
TCCATAGCTTCTTATCCCTGTATTGAGGTAATAAATTGTTTTACTGACAATTTTCTTT  
TTCTACACTAAAACAATATGTGATATATTTCCCTCTTGAAGAGGCAATTCATTAACCTC

Sequence 11678: Found in patent publication WO98/54206

AGTACTTCTAGAATTAATTAACAGACAATTCTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAN

Sequence 11679: Found in patent publication WO99/63088

AGTACTTCTAGAATTAATTAAGGCGGGGAGTTTTATCTATTCTTTACATTGGATGCAAAA  
TGTATTACTCAAGAAGAGGCATTCCGGTATCGAACCATAGATGAACATGATGCCATCATTT  
AAGGAAATCCATGGACCAAGGATGGAATACAGATTGATGCTGCCCTATCAATTAATTTTG  
GTTTATTAATAGTTTAAACAATATTCTCTTTTGAAGATAGTATAAACAGGCCATGCAT  
ATAATGTACAGTGATTACGTAAATATGTAAGATTCTTCAAGGTAACAAGGGTTTGGGT  
TTTGAATAAACATCTGGATCTTATAGACCGTTCATACAATGGTTTTAGCAAGTTCATAG  
TAAGACAAACAAGTCCTATCTTTTTTTTTTTGGCTGGGGTGGGGGCATTGGTCACATAT  
GACCAGTA

Sequence 11680: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCCTTCTGGGTTCTGGCACCATTTCTAGCCATTCTCTTTGTATT  
TAAAAGGACGTTATGAAAGGGCTTAGACCAAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTATGTAGTTCTTCTGCATGCATTAATAATGTTTAGAA  
ATGCTT

Sequence 13322: Found in patent publication WO00/09552

AGTACTTCTAGAATTAATTAAGGCGGGGTCTAGCTCCTTATTTATCTAAATAAGTTTTTA  
CTGGAAA  
AAAAAAAAANTTAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13323: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGGAAAGTTAGAGGAACTGAAAGTTTGGGAATAG  
GCTGACCACATATTATGCCAGTGACCAGTATGACAGGAGATGGGGCCCTGCTGCCAGTCA  
TCTCCACTGAATAAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13324: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGTGCGTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13325: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCCTTCTGGGTTCTGGCACCATTTCTAGCCATTCTCTTTGTATT  
TAAAAGGACGTTATGAAAGGGCTTAGACCAAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTGTGTAGTTCTTCTGCATGTATTAAAAATGTTTAGAA  
A

Sequence 13326: Found in patent publication WO00/06698

GCCCTGGGAACGATTGTGAACGCNTGAATGAATTGATGACTAANATCCGCTGCGGGGGT  
CCTACAGCGCANATGGTAATGCCGTTCTGACTGGCTGGGAACGGCACCTTAGCAAGATA  
CTAAAAGGCGCCTTCTGTGTGCCACNTGCACTCCACCCTGGGCAACAGAGCAAANACCC

Table 3-6

CATCTCAAAAATAAATAAATATATATAAAAAATAAAAAGCTATTTCTAGTTTNATTTAC  
TATAAAGTTTTGCTTTTATTA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAAACTCCGTGTCTACTAAAAATACAAAATTGGCTGGGCCGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAAAAAAAAAAAAATAAATAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTCGTTTTACACCCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAAATTTAGTCCATTATGATTTTCCTT  
TCTCACATAATTACTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTTAACTAC  
AGCTATCAGCATGGACAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACCTTCAAATGGCATTACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCCTTAATCGTGGACTCATCTACGTAGAAGTAGG  
CCAGTATGGCTTTGCACTAGAGGATTTTAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGNTACTTNCTAGAAATTAATTAAGGGCGGGGNTAGANCAAAAAAAAAATAAAC  
AACACAAAAAAAAACNAAAAATANAAAAAAAAAAAAAAAAANNNANNCANNNAAAAANTAA  
AAATTNNNTATTTATTTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAGAAA  
AAATAANTAAAAAATTNATAAANAATAAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAACC  
TAA  
AA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAAAAAA  
AA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAGACTAAGTTGTCAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTCGAACCTTTTAGGC  
TTTGTAAGGAGTTTTGGTTTTCTCCTAATAGCAATGGGATATCTTCCAAGGAATCTCAA  
TCAAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAAAAAANNGNNNNNNCCCNNTNTTTTTTTT

**Table 3-6**

Sequence 11676: Found in patent publication WO00/05367

AGTACTTCTAGAATTAATTAAGGCGGGCGCCTGCANTCCCAGNTACNCGGNAGGCTGAGG  
CAGGAGAATGGCGTGAACCCANGAGGCGGAGCTTGCAGTGAGCTGAGATCGCGCCACTGC  
NCTCCAGCCTGGGCAACAGAGTGAGACTCCGTCCCGCTAANAAATNANAAAANAANAANN  
CCNGGCCCNCCNCTGGNGNNTTCCCANATCCCNNTTTTNTGAATTTTTTTNCCCCCCCC  
NNNTGGNCCTGTTTTCTACTAGTGATGATCTGGTAATATACAATTTGTCCAGTAGCCAGT  
TTGTTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGCAAAGCCTGTATGACGCT  
GTACACACACAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAACA  
AATCTTCTGGTCA

Sequence 11677: Found in patent publication WO99/46375

AGTACTTCTAGAATTAATTAAGGCGGGGACACCACTTTTCAAAGGACTTCTTGTTTTAG  
CATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTGAGAATTCAGCAT  
ATTTAAGGGCATTCTTTGATTCTCAAAGTTTTCAGCATTCTTTTGAATTGAGAAGCCTA  
TACATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACCTGAACCATTCAAAGGATT  
TTTTTGTAAAACCTGGATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTTCTT  
TCCATAGCTTCTTATCCCTGTATTGAGGTAATAAATTGTTTTACTGACAATTTTCTTT  
TTCTACACTAAAACAATATGTGATATATTTCCCCTCTGAAGAGGCAATTCATTAACTC

Sequence 11678: Found in patent publication WO98/54206

AGTACTTCTAGAATTAATTAACAGACAATTCTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAN

Sequence 11679: Found in patent publication WO99/63088

AGTACTTCTAGAATTAATTAAGGCGGGGAGTTTTATCTATTCTTTACATTGGATGCAAAA  
TGTATTACTCAAGAAGAGGCATTTCGGTATCGAACCATAGATGAACATGATGCCATCATT  
AAGGAAATCCATGGACCAAGGATGGAATACAGATTGATGCTGCCCTATCAATTAATTTTG  
GTTTATTAATAGTTTAAAACAATATTCTTTTTTGAAGATAGTATAAACAGGCCATGCAT  
ATAATGTACAGTGATTACGTAAATATGTAAAGATTCTTCAAGGTAACAAGGGTTTGGGT  
TTTGAATAAACATCTGGATCTTATAGACCGTTCATACAATGGTTTTAGCAAGTTCATAG  
TAAGACAAACAAGTCCTATCTTTTTTTTTTTGGCTGGGGTGGGGGCATTGGTCACATAT  
GACCAGTA

Sequence 11680: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCGTAGCCATTCTCTTTGTATT  
TTAAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTATGTAGTTCTTCTGCATGCATTAATAATGTTTAGAA  
ATGCTT

Sequence 13322: Found in patent publication WO00/09552

AGTACTTCTAGAATTAATTAAGGCGGGTCTAGCTCCTTATTTATCTAAATAAAGTTTTA  
CTGGAAA  
AAAAAAAAANTTAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13323: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGGAAAGTTAGAGGAACTGAAAGTTTGGGAATAG  
GCTGACCACATATTATGCCAGTGACCAGTATGACAGGAGATGGGGCCCTGCTGCCAGTCA  
TCTCCACTGAATAAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13324: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGTTCGGTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13325: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCGTAGCCATTCTCTTTGTATT  
TTAAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTGTGTAGTTCTTCTGCATGTATTAATAATGTTTAGAA

A

Sequence 13326: Found in patent publication WO00/06698

GCCCTGGGAAACGATTGTGAACGCNTGAATGAATTGATGACTAANATCCGCTGCGGGGGT  
CCTACAGCGCANATGGTAATGCCCGTTCTGACTGGCTGGGAACGGCACCTTAGCAAGATA  
CTTAAAAGGCGCCTTCTGTGTGCCACNTGCACTCCACCCTGGGCAACAGAGCAANACCC

Table 3-6

CATCTCAAAAATAAATAAATATATATAAAAAATAAAAAGCTATTTCTAGTTTNATTTCAC  
TATAAGTTTTTGCTTTTATTAAA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAAACTCCGTGTCTACTAAAAATACAAAAATTGGCTGGGCGGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAAAAAAAAAAAAATAAATAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTCGTTTTACACCCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAAATTTTCAGTCCATTATGATTTTCCTT  
TCTCACATAATTACTTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTTAACTAC  
AGCTATCAGCATGGACAAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACCTCAAATGGCATTACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCCTTAATCGTGGACTCATCTACGTAGAACTAGG  
CCAGTATGGCTTTCAGCTAGAGGATTTTAAAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGTACTTNCTAGAAATTAATTAAGGCGGGGNTAGANCAAAAAAAAAATAAAC  
AACAAACAAAAAAAAACNAAAAATANAAAAAAAAAAAAAAAAANNNANNCANNNAAAAANTAA  
AAATTNNNTATTTATTTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAGAAA  
AAATAANTAAAAAATTNATAAANAATAAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAAACC  
TTAA  
AA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAA  
AA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAAGACTAATTGTCAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTGCAACCTTTTAGGC  
TTTGTAAGGAGTTTTGTTTTCTCCTAATAGCAATGGGATATCTTCCAAGGAATCTCAA  
TCAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAAAAAANNGNNNNNNCCCNNTNTTTTTTTT

**Table 3-6**

Sequence 11676: Found in patent publication WO00/05367

AGTACTTCTAGAATTAATTAAGGCGGGCGCCTGCANTCCCAGNTACNCGGNAGGCTGAGG  
CAGGAGAATGGCGTGAACCCANGAGGCGGAGCTTGCAGTGAGCTGAGATCGCGCCACTGC  
NCTCCAGCCTGGGCAACAGAGTGAGACTCCGTCGCTAANAAATNANAAAAANAANN  
CCNGGCCNCCNCTGGNGNNTTCCANATCCNNTTTTNTGAATTTTTTNNCCCCCCC  
NNNTGGNCCTGTTTTCTACTAGTGATGATCTGGTAATATACAATTTGTCCAGTAGCCAGT  
TTGTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAGGCAAAGCCTGTATGACGCT  
GTACACACACAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAACA  
AATCTTCTGGTCA

Sequence 11677: Found in patent publication WO99/46375

AGTACTTCTAGAATTAATTAAGGCGGGGACACCACTTTCAAAGGACTTCTTGGTTTCAG  
CATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTTCAAGATTCAAGCAT  
ATTAAGGGCATTCTTTGATTCTCAAAGTTCAGCATTCAATTTGAATTGAGAAGCCTA  
TACATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACTGAACCAATCAAAGGATT  
TTTTTGTAAAACCTGGATTTCATGTAAGCAAATGAAGAAAAAATATAGATTTTCATT  
TCCATAGCTTCTTATCCCTGTATTGAGGTAATAAATTGTTTTACTGACAATTTTCTTT  
TTCTACACTAAACAATATGTGATATATTTCCCTCTTGAAGAGGCAATTCATTAAACTC

Sequence 11678: Found in patent publication WO98/54206

AGTACTTCTAGAATTAATTAACACAGACAATTCTTAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAN

Sequence 11679: Found in patent publication WO99/63088

AGTACTTCTAGAATTAATTAAGGCGGGGAGTTTTATCTATTCTTTACATTGGATGCAAAA  
TGTATTACTCAAGAAGAGGCATTCCGGTATCGAACCATAGATGAACATGATGCCATCATTT  
AAGGAAATCCATGGACCAAGGATGGAATACAGATTGATGCTGCCCTATCAATTAATTTTG  
GTTTATTAATAGTTTAAACAATATTCTCTTTTGAATAGTATAAACAGGCCATGCAT  
ATAATGTACAGTGATTACGTAATATGTAAAGATTCTTCAAGGTAACAAGGGTTTGGGT  
TTTGAATAAACATCTGGATCTTATAGACCGTTCATACAATGGTTTTAGCAAGTTCATAG  
TAAGACAAACAAGTCCTATCTTTTTTTTTTTGGCTGGGGTGGGGGCATTGGTCACATAT  
GACCACTA

Sequence 11680: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCGTAGCCATTCTCTTTGTATT  
TTAAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTATGTAGTTCTTCTGCATGCATTAATAATGTTTAGAA  
ATGCTT

Sequence 13322: Found in patent publication WO00/09552

AGTACTTCTAGAATTAATTAAGGCGGGGTCTAGCTCCTTATTTATCTAAATAAAGTTTTA  
CTGGAAA  
AAAAAAAAANTTAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13323: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGGAAAGTTAGAGGAACTGAAAGTTTGGGAATAG  
GCTGACCACATATTATGCCAGTGACCAGTATGACAGGAGATGGGGCCCTGCTGCCAGTCA  
TCTCCACTGAATAAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13324: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGTTCGTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13325: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTCGTAGCCATTCTCTTTGTATT  
TTAAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGGAGAGTCTGTGTAGTTCTTCTGCATGTATTAATAATGTTTAGAA  
A

Sequence 13326: Found in patent publication WO00/06698

GCCCTGGGAAACGATTGTGAACGCNTGAATGAATTGATGACTAANATCCGCTGCGGGGGT  
CCTACAGCGCANATGGTAATGCCCGTTCTGACTGGCTGGGAACGGCACCTTAGCAAGATA  
CTTAAAAGGCGCCTTCTGTGTGCCACNTGCACTCCACCCTGGGCAACAGAGCAAANACCC

Table 3-6

CATCTCAAAAATAAATAAATATATATAAAAAATAAAAAGCTATTTCTAGTTTNATTTAC  
TATAAGTTTTGCTTTTATTA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAACTCCGTGTCTACTAAAAATACAAAAATTGGCTGGGCCGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAATAAATAAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTCGTTTTACACCCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAATTTTCAGTCCATTATGATTTTCCTT  
TCTCACATAATTACTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTTAACTAC  
AGCTATCAGCATGGACAAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACCTCAAATGGCATTACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCCTTAATCGTGGACTCATCTACGTAGAAGTAGG  
CCAGTATGGCTTTCAGTAGAGGATTTTAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGNTACTTNTAGAAATTAATTAAGGCGGGGNTAGANCAAAAAAATAAAAC  
AACAACAAAAAANAAAAATANAAAAAANNNANNCANNNAAAAANTAA  
AAATNNNTATTTATTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAGAAA  
AAATAANTAAAAAATTNATAAANAATAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAACC  
TTAA  
AA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAA  
AA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAGACTAACTTGTGAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTGCAACCTTTAGGC  
TTTGTAAGGAGTTTTGGTTTTCTCCTAATAGCAATGGGATATCTCCAAGGAATCTCAA  
TCAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAANNGNNNNNNCCCNNTNTTTTTTTT

Table 3-6

Sequence 11676: Found in patent publication WO00/05367

AGTACTTCTAGAATTAATTAAGGCGGGCGCCTGCANTCCAGNTACNCGGNAGGCTGAGG  
CAGGAGAATGGCGTGAACCCANGAGGCGGAGCTTGCAGTGAGCTGAGATCGCGCCACTGC  
NCTCCAGCCTGGGCAACAGAGTGAGACTCCGTCCTGCTAANAAATNANAAAAANAANN  
CCNGGCCCNCCNCTGGNGNNTTCCANATCCNNTTTTNTGAATTTTTTNCNCCCCCCC  
NNNTGGNCCTGTTTTCTACTAGTGATGATCTGGTAATATACAATTTGTCCAGTAGCCAGT  
TTGTTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGCAAAGCCTGTATGACGCT  
GTACACACACAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAACA  
AATCTTCTGGTCA

Sequence 11677: Found in patent publication WO99/46375

AGTACTTCTAGAATTAATTAAGGCGGGGACACCCTTTTCAAAGGACTTCTTGGTTTCAG  
CATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTGAGAATTCAGCAT  
ATTTAAGGGCATTCTTTCTTTGATTCTCAAAGTTTCAGCATTCTTTTGAATTGAGAAGCCTA  
TACATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACCTGAACCATTCAAAGGATT  
TTTTTTGTTTAAACTGGATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTTCATT  
TCCATAGCTTCTTATCCCTGTATTGAGGTAATAAATTGTTTTACTGACAATTTTTCCTTT  
TTCTACACTAAAACAATATGTGATATATTTCCCTCTTGAAGAGGCAATTCATTAACTC

Sequence 11678: Found in patent publication WO98/54206

AGTACTTCTAGAATTAATTAACAGACAATTCCTAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAN

Sequence 11679: Found in patent publication WO99/63088

AGTACTTCTAGAATTAATTAAGGCGGGGAGTTTTATCTATTCTTTACATTGGATGCAAAA  
TGTATTACTCAAGAAGAGGCATTCCGGTATCGAACCATAGATGAACATGATGCCATCATT  
AAGGAAATCCATGGACCAAGGATGGAATACAGATTGATGCTGCCCTATCAATTAATTTTG  
GTTTATTAATAGTTTTAAACAATATTCTCTTTTTGAAAATAGTATAACAGGCCATGCAT  
ATAATGTACAGTGATTACGTAAATATGTAAAGATTCTTCAAGGTAACAAGGGTTTGGGT  
TTTGAAATAAACATCTGGATCTTATAGACCGTTCATACAATGGTTTTAGCAAGTTCATAG  
TAAGACAAACAAGTCCTATCTTTTTTTTTTTGGCTGGGGTGGGGGCATTGGTCACATAT  
GACCAGTA

Sequence 11680: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTTCGTAGCCATTCTCTTTGTATT  
TAAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGAGAGTCTATGTAGTTCTTTCTGCATGCATTAATAATGTTTAGAA  
ATGCTT

Sequence 13322: Found in patent publication WO00/09552

AGTACTTCTAGAATTAATTAAGGCGGGGTCTAGCTCCTTATTTATCTAAATAAAGTTTTA  
CTGGAAA  
AAAAAAAAANTTAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13323: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGGAAAGTTAGAGGAACTGAAAGTTTGGGAATAG  
GCTGACCACATATTATGCCAGTGACCAGTATGACAGGAGATGGGGCCCTGCTGCCAGTCA  
TCTCCACTGAATAAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13324: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGTTCGGTTAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 13325: Found in patent publication WO99/67383

AGTACTTCTAGAATTAATTAAGGCGGGTCCCTGCTTGTCTATGAACTGCTCAGAGCTCC  
TGTCAGTCCAGCTGGGCCTTCTGGGTTCTGGCACCATTTTCGTAGCCATTCTCTTTGTATT  
TAAAAGGACGTTATGAAAGGGCTTAGACCAAATAAATCATAATGTTACTTGAGCCACC  
TTATATAGCTGCTTGAGAGTCTGTGTAGTTCTTTCTGCATGTATTAATAATGTTTAGAA

A

Sequence 13326: Found in patent publication WO00/06698

GCCCTGGGAAACGATTGTGAACGCNTGAATGAATTGATGACTAANATCCGCTGCGGGGGT  
CCTACAGCGCANATGGTAATGCCCGTTCTGACTGGCTGGGAACGGCACCTTAGCAAGATA  
CTTAAAAGGCGCCTTCTGTGTGCCACNTGCACTCCACCCTGGGCAACAGAGCAAANACCC

Table 3-6

CATCTCAAAAATAAATAAATATATATAAAAAATAAAAAAGCTATTTCTAGTTTNATTTAC  
TATAAAGTTTTGCTTTTATTTAA

Sequence 13327: Found in patent publication US6034229

AGTACTTCTAGAATTAATTAAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACCAGCCT  
GGCCAACATGGTGAACCTCCGTGTCTACTAAAAATACAAAAATTGGCTGGGCCGTGGTGG  
TTCGCACCTGTAGTCCCAGCTACTGGGGGGCTGAGGCAGGAGAATGGCTTGAACCCGGG  
AGGGTAGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTCCAGCCTGGGCGACTGAGC  
AAGACTGTCTAAAAAATAAATAAAGNAA

Sequence 13328: Found in patent publication WO00/18925

GCCGTCGTTTTACACCCCGNAANAANCNATANCNATGATNGNTGCCNGTCCCNCTCNNNA  
NAGNAATAATAAANTAATTAANGCGGGTGATTAAATTTAGTCCATTATGATTTTCCTT  
TCTCACATAATTACTTTTTTCTTTTAGACTTATAAGCTAGCAATTACAGATTTAACTAC  
AGCTATCAGCATGGACAAAAATAGTTATACAGCATTTTATAACAGAGCATTATGTTACAC  
CAAGATAAGGGAACTTCAAATGGCATTACAGATTATGGAATTGTGCTGCTTCTTGATGC  
TACAGAACTGTNAACTAAATACCTTCCTTAATCGTGGACTCATCTACGTAGAAGTAGG  
CCAGTATGGCTTTGCACTAGAGGATTTTAAAC

Sequence 15908: Found in patent publication WO98/33916

CTNCGANGNTACTTNCTAGAAATTAATTAAGGGCGGGGNTAGANCAAAAAAATAAAAC  
ACAACAACAAAAAACNAAAAATANAAAAAANANNANNCANNNAAAAANTAA  
AAATTNNNTATTTATTTAAANTAAAAANTATACTNAACTAATTATTTNAATTAAGAAA  
AAATAANTAAAAAATTNATAAANAATAAATNTTAAATAAAAAATATT

Sequence 15909: Found in patent publication WO99/14328

AGTACTTCTAGAATTAATTAAGGCGGGGAGAGGAGGCTCTCAATAAATAATCGTGTAAAC  
TTAAA  
AAA

Sequence 15910: Found in patent publication WO99/66041

AGTACTTCTAGAATTAATTAAGGCGGGCAATAAAAGTTGTCATGGTGTGTAAAAA  
AAA

Sequence 15911: Found in patent publication WO00/05382

TGGGTGCCGGGCCCCCCTCGAGAGTACTTCTAGAATTAATTAAGGCGGGAGAAAAGGAA  
AAGACATTCCAGACAAAAGACTAAGTTGTCAGAAAGCCCTGTGGCGGAAGGGAGCTTTT  
CCAATATGAAGAACTGAGCCTGGAGAGATGGGATGAGGGGGAGTGTGCAACCTTTTAGGC  
TTTGTAAGGAGTTTTGGTTTTCTCCTAATAGCAATGGGATATCTTCAAGGAATCTCAA  
TCAAAAGGGAGAGATGGCTCCGATTGGAATGTCATCCCTGGCTGAAGAGTAGAGGAAGCA  
AAAAAAAAAAAAAAAAAANNGNNNNNNCCCNNTNTTTTTTTT

09768827 012401



Table 4-1

Sequence ID	Accession	Sequence 52	AA321222
Sequence 1	AA371205	Sequence 53	AA482285
Sequence 2	AI366380	Sequence 54	AA933627
Sequence 3	AA315950	Sequence 55	AA349223
Sequence 4	AA112869	Sequence 56	AI267257
Sequence 5	AA838003	Sequence 57	AA449435
Sequence 6	N52554	Sequence 58	AA029881
Sequence 7	AL039430	Sequence 59	AI267285
Sequence 8	AI620796	Sequence 60	AA449305
Sequence 9	AI129714	Sequence 61	AA043133
Sequence 10	AA885293	Sequence 62	AL120521
Sequence 11	AA631903	Sequence 63	AA443154
Sequence 12	AI057093	Sequence 64	AI267185
Sequence 13	AA680351	Sequence 65	AA431868
Sequence 14	AA149579	Sequence 66	R28603
Sequence 15	H64252	Sequence 67	AI767050
Sequence 16	AA393816	Sequence 68	AI253345
Sequence 17	AI924963	Sequence 69	T08429
Sequence 18	R18412	Sequence 70	D53496
Sequence 19	AI267519	Sequence 71	AI267492
Sequence 20	AW068579	Sequence 72	AA868512
Sequence 21	AI051210	Sequence 73	T61421
Sequence 22	AA628113	Sequence 74	AI636911
Sequence 23	AI597980	Sequence 75	AI674594
Sequence 24	AA195579	Sequence 76	AA806717
Sequence 25	AA166952	Sequence 77	AA436125
Sequence 26	AA452288	Sequence 78	H17871
Sequence 27	AA188228	Sequence 79	AA075189
Sequence 28	AA256591	Sequence 80	AA147659
Sequence 29	R70639	Sequence 81	AA916753
Sequence 30	AA315689	Sequence 82	AA173990
Sequence 31	AA133268	Sequence 83	AI201294
Sequence 32	AA193411	Sequence 84	AA278445
Sequence 33	AA156244	Sequence 85	AI536588
Sequence 34	AI298496	Sequence 86	AA458549
Sequence 35	AI201298	Sequence 87	AA772075
Sequence 36	W07378	Sequence 88	AI499516
Sequence 37	AI089431	Sequence 89	AA156987
Sequence 38	AA649107	Sequence 90	AA493512
Sequence 39	AA714567	Sequence 91	AA522492
Sequence 40	AI744810	Sequence 92	AA331876
Sequence 41	AA024963	Sequence 93	R19183
Sequence 42	R14619	Sequence 94	AA381480
Sequence 43	AW104561	Sequence 95	AA625228
Sequence 44	AA296298	Sequence 96	AI793283
Sequence 45	AI267502	Sequence 97	AI694211
Sequence 46	AA804659	Sequence 98	AW023714
Sequence 47	AA053932	Sequence 99	AA004794
Sequence 48	AI366549	Sequence 100	AA027037
Sequence 49	AI267256	Sequence 101	R35797
Sequence 50	AA453996	Sequence 102	N31529
Sequence 51	AA482403	Sequence 103	AA578265

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Sequence 104	AI267255	Sequence 156	AA393650
Sequence 105	AI800250	Sequence 157	AA558281
Sequence 106	AA551189	Sequence 158	Z17864
Sequence 107	AA652667	Sequence 159	AL038162
Sequence 108	AA081218	Sequence 160	AA136944
Sequence 109	W21047	Sequence 161	AA493331
Sequence 110	AI216972	Sequence 162	N32192
Sequence 111	AA010986	Sequence 163	AA621405
Sequence 112	N72458	Sequence 164	AA485102
Sequence 113	AI089923	Sequence 165	AA262588
Sequence 114	AI039200	Sequence 166	AA760894
Sequence 115	AL121420	Sequence 167	AI692513
Sequence 116	AI123347	Sequence 168	AA312968
Sequence 117	AA654650	Sequence 169	AA305627
Sequence 118	AI417562	Sequence 170	AA336621
Sequence 119	AA047587	Sequence 171	AA521385
Sequence 120	AI954167	Sequence 172	AA055186
Sequence 121	AA167719	Sequence 173	R11877
Sequence 122	AA354341	Sequence 174	AA143021
Sequence 123	AA304846	Sequence 175	AI797353
Sequence 124	AA489447	Sequence 176	AA234578
Sequence 125	AA634799	Sequence 177	D44737
Sequence 126	AI619798	Sequence 178	AA456721
Sequence 127	AI688807	Sequence 179	AA310142
Sequence 128	AI361119	Sequence 180	AA872858
Sequence 129	AA286965	Sequence 181	AA133742
Sequence 130	W37343	Sequence 182	AA028887
Sequence 131	AI188563	Sequence 183	AW022072
Sequence 132	W80673	Sequence 184	AA152276
Sequence 133	AA564067	Sequence 185	AA443829
Sequence 134	AI033912	Sequence 186	AI095031
Sequence 135	AI300489	Sequence 187	AA446789
Sequence 136	AI267454	Sequence 188	AA307857
Sequence 137	AA555115	Sequence 189	R10011
Sequence 138	AA524064	Sequence 190	AI267271
Sequence 139	AA808211	Sequence 191	AW148750
Sequence 140	AA248319	Sequence 192	AI692940
Sequence 141	AA679304	Sequence 193	AA469199
Sequence 142	AA018249	Sequence 194	AA070335
Sequence 143	AA303924	Sequence 195	AI873501
Sequence 144	AA311860	Sequence 196	AI769975
Sequence 145	AI624709	Sequence 197	AA522549
Sequence 146	AI219803	Sequence 198	AA142865
Sequence 147	AA149415	Sequence 199	AA431677
Sequence 148	AI630228	Sequence 200	AA349232
Sequence 149	AL047850	Sequence 201	AA521351
Sequence 150	AA766817	Sequence 202	AI051959
Sequence 151	AI933533	Sequence 203	AA262123
Sequence 152	AA603158	Sequence 204	AI266043
Sequence 153	AA058906	Sequence 205	AA215332
Sequence 154	AA972598	Sequence 206	AA447189
Sequence 155	AI760699	Sequence 207	AA037024

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Sequence 208	AW006468	Sequence 260	R49052
Sequence 209	AA082477	Sequence 261	AA878211
Sequence 210	AA094656	Sequence 262	AI343404
Sequence 211	N40952	Sequence 263	AA625538
Sequence 212	AA165090	Sequence 264	AA134126
Sequence 213	AA158274	Sequence 265	AI188081
Sequence 214	AA196978	Sequence 266	AI015245
Sequence 215	AI631703	Sequence 267	AA460816
Sequence 216	AA679434	Sequence 268	AI557225
Sequence 217	AA306787	Sequence 269	AA156790
Sequence 218	AA708958	Sequence 270	AA397448
Sequence 219	AA640474	Sequence 271	AA280952
Sequence 220	T47718	Sequence 272	AA715365
Sequence 221	R33762	Sequence 273	AA652600
Sequence 222	AA857478	Sequence 274	AA099572
Sequence 223	AI570611	Sequence 275	AI267384
Sequence 224	AA188312	Sequence 276	AI884829
Sequence 225	AA765909	Sequence 277	AA621165
Sequence 226	AA251627	Sequence 278	AI761728
Sequence 227	AA082063	Sequence 279	AA122237
Sequence 228	AI557626	Sequence 280	H51976
Sequence 229	AA204650	Sequence 281	AI391501
Sequence 230	AA335273	Sequence 282	AA613772
Sequence 231	AI346381	Sequence 283	AA578976
Sequence 232	D82303	Sequence 284	AA731507
Sequence 233	AI697849	Sequence 285	AI216358
Sequence 234	AA010869	Sequence 286	AI557112
Sequence 235	AA833543	Sequence 287	AL079529
Sequence 236	AA664472	Sequence 288	AA244003
Sequence 237	AA315896	Sequence 289	AA625141
Sequence 238	N40262	Sequence 290	T59687
Sequence 239	AA507505	Sequence 291	AA013245
Sequence 240	AI183745	Sequence 292	AI401220
Sequence 241	AI146478	Sequence 293	AA324826
Sequence 242	AA587806	Sequence 294	AL047535
Sequence 243	AA355956	Sequence 295	AI267522
Sequence 244	AA225115	Sequence 296	AI682937
Sequence 245	AA504560	Sequence 297	F08579
Sequence 246	AA639999	Sequence 298	AI557053
Sequence 247	AA420680	Sequence 299	R83716
Sequence 248	R63251	Sequence 300	AI366467
Sequence 249	T67823	Sequence 301	H79449
Sequence 250	AA486862	Sequence 302	AI267162
Sequence 251	R81053	Sequence 303	T06984
Sequence 252	AA457365	Sequence 304	H83781
Sequence 253	AA640280	Sequence 305	AA121145
Sequence 254	AA373628	Sequence 306	AA314941
Sequence 255	AA056744	Sequence 307	AI379597
Sequence 256	AL120828	Sequence 308	AI694477
Sequence 257	AI654123	Sequence 309	AA210833
Sequence 258	AA425414	Sequence 310	AA521163
Sequence 259	D60110	Sequence 311	AA126834

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Sequence 312	AA437224	Sequence 364	AA659719
Sequence 313	AA402010	Sequence 365	AA333526
Sequence 314	AA436197	Sequence 366	AA235224
Sequence 315	AA313692	Sequence 367	AI018034
Sequence 316	AA836682	Sequence 368	AA284997
Sequence 317	AA029276	Sequence 369	AA401802
Sequence 318	AA017175	Sequence 370	T71615
Sequence 319	AA516531	Sequence 371	R23858
Sequence 320	AA465494	Sequence 372	AL039698
Sequence 321	AI394646	Sequence 373	AF017714
Sequence 322	AA927118	Sequence 374	AI267570
Sequence 323	AW062373	Sequence 375	AA525386
Sequence 324	Z20613	Sequence 376	AL037256
Sequence 325	AA134311	Sequence 377	AI040598
Sequence 326	AA612864	Sequence 378	W58731
Sequence 327	AA631868	Sequence 379	AI356805
Sequence 328	AI239435	Sequence 380	AA033951
Sequence 329	T70288	Sequence 381	AA282215
Sequence 330	AA285043	Sequence 382	AA421795
Sequence 331	AA705546	Sequence 383	AA767784
Sequence 332	AW169890	Sequence 384	AA284615
Sequence 333	AI082617	Sequence 385	R18215
Sequence 334	AA345027	Sequence 386	AA122080
Sequence 335	AI217172	Sequence 387	AA157875
Sequence 336	AA449907	Sequence 388	AA040673
Sequence 337	AA626511	Sequence 389	AA463761
Sequence 338	AI002821	Sequence 390	AA527805
Sequence 339	AA505073	Sequence 391	AA036798
Sequence 340	T71154	Sequence 392	R25807
Sequence 341	AW070326	Sequence 393	AA675892
Sequence 342	AA366269	Sequence 394	W03191
Sequence 343	R71619	Sequence 395	AI016031
Sequence 344	AA058568	Sequence 396	AA258079
Sequence 345	AA359418	Sequence 397	AA150033
Sequence 346	AA305599	Sequence 398	AA297647
Sequence 347	AI269053	Sequence 399	AI610699
Sequence 348	AA403121	Sequence 400	AA120964
Sequence 349	AA514302	Sequence 401	AA814091
Sequence 350	AA174144	Sequence 402	AI474235
Sequence 351	AW177204	Sequence 403	AA307371
Sequence 352	AA580097	Sequence 404	AA344133
Sequence 353	AA664480	Sequence 405	AA316649
Sequence 354	W60040	Sequence 406	AI694320
Sequence 355	R71431	Sequence 407	AA017096
Sequence 356	AA581846	Sequence 408	AA452999
Sequence 357	AI216968	Sequence 409	AA297472
Sequence 358	AA243573	Sequence 410	W87509
Sequence 359	AL037638	Sequence 411	AA020941
Sequence 360	R49734	Sequence 412	R64194
Sequence 361	AA223433	Sequence 413	AI042293
Sequence 362	AA157267	Sequence 414	AA044118
Sequence 363	AL046802	Sequence 415	H25806

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Sequence 416	AA383011	Sequence 468	AA308486
Sequence 417	AA328366	Sequence 469	AA773998
Sequence 418	AI216969	Sequence 470	AA644237
Sequence 419	AA165339	Sequence 471	AA173721
Sequence 420	AA308063	Sequence 472	AA458528
Sequence 421	N52271	Sequence 473	AI400752
Sequence 422	AA315718	Sequence 474	AA807276
Sequence 423	AI554809	Sequence 475	AW022792
Sequence 424	H81755	Sequence 476	AI989600
Sequence 425	AA829350	Sequence 477	AI267838
Sequence 426	R45470	Sequence 478	AA825265
Sequence 427	AA133652	Sequence 479	AA229199
Sequence 428	AA405892	Sequence 480	AW003442
Sequence 429	AW139567	Sequence 481	AI275711
Sequence 430	AA225114	Sequence 482	R11581
Sequence 431	AA343168	Sequence 483	AA931943
Sequence 432	AA040405	Sequence 484	AA770272
Sequence 433	AA229745	Sequence 485	D55192
Sequence 434	AA830959	Sequence 486	AA129551
Sequence 435	AW075906	Sequence 487	AA772683
Sequence 436	AA533227	Sequence 488	AA047752
Sequence 437	AA079041	Sequence 489	AI366471
Sequence 438	N31825	Sequence 490	AI267669
Sequence 439	AA503132	Sequence 491	AA702679
Sequence 440	AA318969	Sequence 492	AA449544
Sequence 441	AW020429	Sequence 493	AA133757
Sequence 442	AA315072	Sequence 494	AA287347
Sequence 443	AA709208	Sequence 495	AA548129
Sequence 444	H14446	Sequence 496	AA355351
Sequence 445	AA548124	Sequence 497	AA164703
Sequence 446	AI927636	Sequence 498	H15660
Sequence 447	AI697249	Sequence 499	AI417910
Sequence 448	AA146900	Sequence 500	AL041265
Sequence 449	N94259	Sequence 501	AI281449
Sequence 450	AA215284	Sequence 502	AA447021
Sequence 451	AI000877	Sequence 503	AA032194
Sequence 452	AA373289	Sequence 504	AI079595
Sequence 453	AA040624	Sequence 505	AA181179
Sequence 454	AA227789	Sequence 506	AA368792
Sequence 455	AI378932	Sequence 507	AA522856
Sequence 456	AA936532	Sequence 508	AI004135
Sequence 457	AL043113	Sequence 509	D82197
Sequence 458	AL121031	Sequence 510	AW083338
Sequence 459	AA508810	Sequence 511	AI076608
Sequence 460	AA129003	Sequence 512	AI754013
Sequence 461	R63823	Sequence 513	AA088322
Sequence 462	N24785	Sequence 514	AI480424
Sequence 463	T95139	Sequence 515	AA151796
Sequence 464	AI480345	Sequence 516	AA034322
Sequence 465	AA181111	Sequence 517	AI207660
Sequence 466	AA908961	Sequence 518	T81369
Sequence 467	AA836233	Sequence 519	AA885902

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Sequence 520	AI332597	Sequence 572	AI198986
Sequence 521	AA043891	Sequence 573	AI972279
Sequence 522	AA531606	Sequence 574	H00112
Sequence 523	AA504728	Sequence 575	AI267480
Sequence 524	AA315118	Sequence 576	AI623984
Sequence 525	AI391717	Sequence 577	AA701667
Sequence 526	AA337114	Sequence 578	AA988520
Sequence 527	AA573557	Sequence 579	AA312025
Sequence 528	AI630584	Sequence 580	AA421510
Sequence 529	AA534235	Sequence 581	AA259166
Sequence 530	H56898	Sequence 582	AA459831
Sequence 531	AI073907	Sequence 583	AA284410
Sequence 532	AI471561	Sequence 584	AA578295
Sequence 533	T28974	Sequence 585	R20651
Sequence 534	AA307475	Sequence 586	AA364882
Sequence 535	AI952763	Sequence 587	AA135135
Sequence 536	AA524893	Sequence 588	AI332939
Sequence 537	AI927846	Sequence 589	W87865
Sequence 538	H12056	Sequence 590	AA465598
Sequence 539	AA010758	Sequence 591	AA022478
Sequence 540	AA334403	Sequence 592	U72041
Sequence 541	AI625404	Sequence 593	AI239822
Sequence 542	AI356309	Sequence 594	AI253293
Sequence 543	AI768908	Sequence 595	AA206721
Sequence 544	T06925	Sequence 596	AA447322
Sequence 545	AI656158	Sequence 597	AA044896
Sequence 546	AI366461	Sequence 598	AA149421
Sequence 547	T30677	Sequence 599	AL047056
Sequence 548	AA436472	Sequence 600	AW057515
Sequence 549	AA628409	Sequence 601	AA774247
Sequence 550	AA263162	Sequence 602	AA412501
Sequence 551	AA468167	Sequence 603	AI458457
Sequence 552	AI929464	Sequence 604	AA307513
Sequence 553	AA465340	Sequence 605	AI761702
Sequence 554	AI984636	Sequence 606	AA400418
Sequence 555	AA687571	Sequence 607	AA524651
Sequence 556	AA488809	Sequence 608	AW102941
Sequence 557	AI557235	Sequence 609	AW188391
Sequence 558	AA609641	Sequence 610	T07196
Sequence 559	AI458673	Sequence 611	AI440194
Sequence 560	AW166338	Sequence 612	AI431350
Sequence 561	AA984384	Sequence 613	R60395
Sequence 562	AI923011	Sequence 614	AA263042
Sequence 563	AI744818	Sequence 615	AI267216
Sequence 564	AA708501	Sequence 616	AA027868
Sequence 565	AA402500	Sequence 617	AI357642
Sequence 566	AA132633	Sequence 618	AA430752
Sequence 567	AI523222	Sequence 619	AI827667
Sequence 568	AA814859	Sequence 620	AA135254
Sequence 569	H54240	Sequence 621	AW067913
Sequence 570	AI206223	Sequence 622	AI914128
Sequence 571	AI627818	Sequence 623	AA430313

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Sequence 624	AA047517	Sequence 676	AI253335
Sequence 625	AA075810	Sequence 677	AL045332
Sequence 626	AA001414	Sequence 678	AA228953
Sequence 627	AA375531	Sequence 679	AA535837
Sequence 628	R51416	Sequence 680	AW020820
Sequence 629	AA244066	Sequence 681	AI308072
Sequence 630	AA550927	Sequence 682	AA975275
Sequence 631	AA507791	Sequence 683	AI041116
Sequence 632	AI002745	Sequence 684	AI433757
Sequence 633	AA285290	Sequence 685	AI753951
Sequence 634	AI253379	Sequence 686	AA809784
Sequence 635	AA024480	Sequence 687	AA459476
Sequence 636	AA595047	Sequence 688	W37862
Sequence 637	AA281307	Sequence 689	AA206147
Sequence 638	AA468760	Sequence 690	AI697873
Sequence 639	AI670913	Sequence 691	AA311772
Sequence 640	AA311639	Sequence 692	AA447815
Sequence 641	AI128986	Sequence 693	AA312591
Sequence 642	AA478891	Sequence 694	AA216433
Sequence 643	AA613935	Sequence 695	AA622418
Sequence 644	AA318009	Sequence 696	AI922040
Sequence 645	AA203537	Sequence 697	AI589206
Sequence 646	AA017262	Sequence 698	AI928622
Sequence 647	AA351443	Sequence 699	AA485767
Sequence 648	AA352938	Sequence 700	AA070393
Sequence 649	AA446322	Sequence 701	AI216966
Sequence 650	F12000	Sequence 702	AA639964
Sequence 651	AA001460	Sequence 703	AA204847
Sequence 652	AA346504	Sequence 704	AA491866
Sequence 653	AA779728	Sequence 705	AA227647
Sequence 654	AA349541	Sequence 706	AA448514
Sequence 655	AA115636	Sequence 707	AA171807
Sequence 656	AI050871	Sequence 708	AA765140
Sequence 657	AA827196	Sequence 709	AA172188
Sequence 658	AA393886	Sequence 710	AA029835
Sequence 659	AA083288	Sequence 711	AA907660
Sequence 660	AA302548	Sequence 712	AA770505
Sequence 661	AI085559	Sequence 713	AA070624
Sequence 662	AA812209	Sequence 714	AI139200
Sequence 663	AI253347	Sequence 715	AA025834
Sequence 664	AA082629	Sequence 716	AA504322
Sequence 665	AA121656	Sequence 717	AA307033
Sequence 666	R88370	Sequence 718	AI269415
Sequence 667	AA383100	Sequence 719	AA345139
Sequence 668	AI267353	Sequence 720	AA361618
Sequence 669	AA280873	Sequence 721	AA627073
Sequence 670	AI690986	Sequence 722	R74152
Sequence 671	AA028008	Sequence 723	AA578773
Sequence 672	AA179664	Sequence 724	AA558636
Sequence 673	AI557338	Sequence 725	AA768951
Sequence 674	Z44402	Sequence 726	D79826
Sequence 675	AI366374	Sequence 727	H12519

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Sequence 728	AA508889	Sequence 780	AA224269
Sequence 729	AL036423	Sequence 781	AI708364
Sequence 730	AA135065	Sequence 782	AA442352
Sequence 731	W93718	Sequence 783	AA725525
Sequence 732	AA022788	Sequence 784	AA418403
Sequence 733	AA358369	Sequence 785	AA228845
Sequence 734	F12883	Sequence 786	AA453550
Sequence 735	AA523902	Sequence 787	AA522664
Sequence 736	AA255526	Sequence 788	AI133612
Sequence 737	W94398	Sequence 789	AW138413
Sequence 738	AA435877	Sequence 790	AI216986
Sequence 739	T83709	Sequence 791	AI638492
Sequence 740	R14684	Sequence 792	AW103377
Sequence 741	AI671555	Sequence 793	AA486413
Sequence 742	AA037683	Sequence 794	AA019152
Sequence 743	AI188078	Sequence 795	H64556
Sequence 744	AI817432	Sequence 796	AA670280
Sequence 745	AA364656	Sequence 797	AA370976
Sequence 746	AA489433	Sequence 798	AA502798
Sequence 747	AA037450	Sequence 799	AA446366
Sequence 748	AA460930	Sequence 800	N67168
Sequence 749	AA166925	Sequence 801	W04240
Sequence 750	N98749	Sequence 802	AA126750
Sequence 751	AA417324	Sequence 803	H67975
Sequence 752	AA620750	Sequence 804	AI005449
Sequence 753	AA744849	Sequence 805	AA947511
Sequence 754	AA507041	Sequence 806	AL120396
Sequence 755	AI040234	Sequence 807	AA229495
Sequence 756	AA228940	Sequence 808	AA324252
Sequence 757	F05508	Sequence 809	AA354245
Sequence 758	C04925	Sequence 810	AA314028
Sequence 759	AA662702	Sequence 811	AA574248
Sequence 760	AI630144	Sequence 812	AA569482
Sequence 761	T72376	Sequence 813	AA226321
Sequence 762	AA225438	Sequence 814	AI025519
Sequence 763	AA190674	Sequence 815	AA724392
Sequence 764	AA070031	Sequence 816	AA125809
Sequence 765	AA526368	Sequence 817	AA843176
Sequence 766	AA357593	Sequence 818	AW023001
Sequence 767	AA527730	Sequence 819	AI338190
Sequence 768	W26780	Sequence 820	AI817242
Sequence 769	AA002131	Sequence 821	AI521964
Sequence 770	AI332588	Sequence 822	AA325580
Sequence 771	R92548	Sequence 823	AA347577
Sequence 772	AA229713	Sequence 824	D56420
Sequence 773	AA018886	Sequence 825	AA641520
Sequence 774	AA531221	Sequence 826	AI678281
Sequence 775	AA188396	Sequence 827	W27526
Sequence 776	AA452412	Sequence 828	AI380812
Sequence 777	AA112710	Sequence 829	AA625145
Sequence 778	AA385204	Sequence 830	AA573974
Sequence 779	AA295737	Sequence 831	AI525651



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Sequence 832	AI791719	Sequence 884	N41773
Sequence 833	N40717	Sequence 885	R14689
Sequence 834	AI694767	Sequence 886	AA364190
Sequence 835	AA417643	Sequence 887	AA044750
Sequence 836	AI989530	Sequence 888	AA115588
Sequence 837	AI755142	Sequence 889	AA224994
Sequence 838	AA633439	Sequence 890	AA091445
Sequence 839	AA847597	Sequence 891	AA314920
Sequence 840	AI312562	Sequence 892	AA689334
Sequence 841	AA931666	Sequence 893	W03366
Sequence 842	AA742701	Sequence 894	AA405068
Sequence 843	R69818	Sequence 895	AA417904
Sequence 844	AI379679	Sequence 896	AA347085
Sequence 845	W19759	Sequence 897	AA702738
Sequence 846	AA683080	Sequence 898	AA088606
Sequence 847	AA972883	Sequence 899	AA528202
Sequence 848	AA722090	Sequence 900	C75042
Sequence 849	AI267490	Sequence 901	H92683
Sequence 850	AI110836	Sequence 902	AA602675
Sequence 851	AI064763	Sequence 903	AA146941
Sequence 852	AA627785	Sequence 904	AA923172
Sequence 853	AL036650	Sequence 905	AI470259
Sequence 854	AA278473	Sequence 906	AA722204
Sequence 855	AA515109	Sequence 907	F06621
Sequence 856	AL119859	Sequence 908	AA090790
Sequence 857	AA280221	Sequence 909	H05326
Sequence 858	AW088547	Sequence 910	AA328446
Sequence 859	AW178543	Sequence 911	AA298549
Sequence 860	AI826504	Sequence 912	AL036170
Sequence 861	AI754874	Sequence 913	T06574
Sequence 862	AI948822	Sequence 914	AA298285
Sequence 863	AA188875	Sequence 915	AA326242
Sequence 864	AA988011	Sequence 916	C20630
Sequence 865	AA489965	Sequence 917	AA226266
Sequence 866	AA946679	Sequence 918	AA486041
Sequence 867	AA522850	Sequence 919	AA225154
Sequence 868	AI813724	Sequence 920	F09972
Sequence 869	AI740796	Sequence 921	AI590351
Sequence 870	AA317662	Sequence 922	AA301408
Sequence 871	AA099878	Sequence 923	AA505423
Sequence 872	AA372911	Sequence 924	AI693302
Sequence 873	T66793	Sequence 925	H09642
Sequence 874	AA469129	Sequence 926	AA146589
Sequence 875	AI806044	Sequence 927	AA600974
Sequence 876	AI018728	Sequence 928	AA044599
Sequence 877	AA315780	Sequence 929	AA243142
Sequence 878	AA314804	Sequence 930	AI625864
Sequence 879	AI003782	Sequence 931	AA057867
Sequence 880	AI284549	Sequence 932	Z44556
Sequence 881	AA133452	Sequence 933	AA112441
Sequence 882	AA315621	Sequence 934	AA040135
Sequence 883	AA075012	Sequence 935	AA480124

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Sequence 936	AA233943	Sequence 988	AI880872
Sequence 937	AA306902	Sequence 989	T30767
Sequence 938	AA319070	Sequence 990	AI174822
Sequence 939	AA083370	Sequence 991	AI674871
Sequence 940	AI458823	Sequence 992	AA838697
Sequence 941	AI168205	Sequence 993	AA432264
Sequence 942	AA935798	Sequence 994	AI199681
Sequence 943	AA630325	Sequence 995	AA044586
Sequence 944	AA069880	Sequence 996	N67109
Sequence 945	AA707511	Sequence 997	AA169493
Sequence 946	AI263110	Sequence 998	AI554590
Sequence 947	AA713530	Sequence 999	R59789
Sequence 948	AA284064	Sequence 1000	AA305333
Sequence 949	AA576669	Sequence 1001	AW117546
Sequence 950	AA664798	Sequence 1002	AA029403
Sequence 951	AI696488	Sequence 1003	AI248187
Sequence 952	AI758378	Sequence 1004	AI370846
Sequence 953	AI741143	Sequence 1005	AA069801
Sequence 954	AA430271	Sequence 1006	AL120694
Sequence 955	AI754461	Sequence 1007	H83524
Sequence 956	AI280935	Sequence 1008	AI948503
Sequence 957	AA541813	Sequence 1009	AA631437
Sequence 958	AA377796	Sequence 1010	AI744509
Sequence 959	C02739	Sequence 1011	AI050966
Sequence 960	AA165562	Sequence 1012	AA418177
Sequence 961	AL036801	Sequence 1013	AA644624
Sequence 962	AA045870	Sequence 1014	AA025551
Sequence 963	AA300869	Sequence 1015	R42583
Sequence 964	AA305030	Sequence 1016	AI357346
Sequence 965	AA761069	Sequence 1017	AL040518
Sequence 966	AA641623	Sequence 1018	AI627356
Sequence 967	AI246615	Sequence 1019	AA056058
Sequence 968	AA299140	Sequence 1020	AA993414
Sequence 969	AA847452	Sequence 1021	AW129657
Sequence 970	R50277	Sequence 1022	AA399265
Sequence 971	AA252436	Sequence 1023	AA102274
Sequence 972	AA016116	Sequence 1024	N28426
Sequence 973	AA909045	Sequence 1025	AA069407
Sequence 974	AA713517	Sequence 1026	AA652478
Sequence 975	AA743453	Sequence 1027	AA126951
Sequence 976	AL048852	Sequence 1028	AA813266
Sequence 977	AI298459	Sequence 1029	AI309121
Sequence 978	N40598	Sequence 1030	AA743710
Sequence 979	AW173161	Sequence 1031	AA229424
Sequence 980	AA378508	Sequence 1032	AA334754
Sequence 981	AA548465	Sequence 1033	AA401469
Sequence 982	AA777529	Sequence 1034	AL046756
Sequence 983	AA176979	Sequence 1035	AA680052
Sequence 984	AA506459	Sequence 1036	AA632291
Sequence 985	AA306232	Sequence 1037	AA349192
Sequence 986	AA280917	Sequence 1038	AI948513
Sequence 987	AI690979	Sequence 1039	AA772465

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Sequence 1040	AA129772	Sequence 1092	AI143623
Sequence 1041	AI270536	Sequence 1093	AW169473
Sequence 1042	AI124856	Sequence 1094	AA205647
Sequence 1043	AA244071	Sequence 1095	AI755085
Sequence 1044	AI253319	Sequence 1096	AI627945
Sequence 1045	AI188850	Sequence 1097	AA599864
Sequence 1046	AA083300	Sequence 1098	AA403109
Sequence 1047	AA977226	Sequence 1099	AA476756
Sequence 1048	AA121615	Sequence 1100	AA532883
Sequence 1049	AI955087	Sequence 1101	AA305697
Sequence 1050	AI332459	Sequence 1102	AI355050
Sequence 1051	AA506299	Sequence 1103	C06419
Sequence 1052	AI434180	Sequence 1104	AA247232
Sequence 1053	AA102698	Sequence 1105	AI092766
Sequence 1054	AA594131	Sequence 1106	AA705269
Sequence 1055	AA806057	Sequence 1107	AA345925
Sequence 1056	AI683431	Sequence 1108	AA010828
Sequence 1057	AA181017	Sequence 1109	AI302083
Sequence 1058	W37322	Sequence 1110	AA011000
Sequence 1059	AI949242	Sequence 1111	AI080480
Sequence 1060	AA148087	Sequence 1112	AA984407
Sequence 1061	AA053917	Sequence 1113	AA405758
Sequence 1062	AA837048	Sequence 1114	AI373634
Sequence 1063	AI743954	Sequence 1115	AI459234
Sequence 1064	AI623891	Sequence 1116	AA481476
Sequence 1065	AA292011	Sequence 1117	AI278611
Sequence 1066	Z78396	Sequence 1118	M78906
Sequence 1067	Z30311	Sequence 1119	AI031653
Sequence 1068	AA532663	Sequence 1120	AF150208
Sequence 1069	AA298464	Sequence 1121	AA525487
Sequence 1070	AI064691	Sequence 1122	AA351741
Sequence 1071	AI500531	Sequence 1123	AW073731
Sequence 1072	AA148268	Sequence 1124	AA430160
Sequence 1073	AA826464	Sequence 1125	AI084005
Sequence 1074	AI094803	Sequence 1126	AA157733
Sequence 1075	AI971655	Sequence 1127	AA334735
Sequence 1076	H03785	Sequence 1128	AA148206
Sequence 1077	AA120953	Sequence 1129	AA461260
Sequence 1078	AA503078	Sequence 1130	AI686139
Sequence 1079	AI767430	Sequence 1131	AA314161
Sequence 1080	AA236720	Sequence 1132	AA307716
Sequence 1081	AA524672	Sequence 1133	AA592908
Sequence 1082	AA349464	Sequence 1134	AI693674
Sequence 1083	AI914133	Sequence 1135	AI022340
Sequence 1084	AA884119	Sequence 1136	AI802946
Sequence 1085	AA278475	Sequence 1137	AA479284
Sequence 1086	AI865716	Sequence 1138	AI689722
Sequence 1087	AA039812	Sequence 1139	AA085283
Sequence 1088	AA376847	Sequence 1140	AA215800
Sequence 1089	N63784	Sequence 1141	AL043232
Sequence 1090	AA187426	Sequence 1142	AI869322
Sequence 1091	AA228273	Sequence 1143	AA773478

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Sequence 1144	AA968556	Sequence 1196	Z25169
Sequence 1145	AA481979	Sequence 1197	AA971698
Sequence 1146	AA608749	Sequence 1198	AA022937
Sequence 1147	AA521213	Sequence 1199	AA255974
Sequence 1148	AA430754	Sequence 1200	AA625467
Sequence 1149	AA917666	Sequence 1201	AA602662
Sequence 1150	AI743852	Sequence 1202	AI420026
Sequence 1151	AA004642	Sequence 1203	AA215538
Sequence 1152	AA531563	Sequence 1204	AI133208
Sequence 1153	AA280753	Sequence 1205	R11114
Sequence 1154	AA906868	Sequence 1206	AA479689
Sequence 1155	AA479781	Sequence 1207	AA528104
Sequence 1156	AA446116	Sequence 1208	AA034912
Sequence 1157	AA348116	Sequence 1209	AA243835
Sequence 1158	AI080439	Sequence 1210	AW003247
Sequence 1159	AI825988	Sequence 1211	AA479276
Sequence 1160	AI267321	Sequence 1212	AA307209
Sequence 1161	AA679068	Sequence 1213	AI332712
Sequence 1162	AI557336	Sequence 1214	AA702942
Sequence 1163	AA460440	Sequence 1215	AW163314
Sequence 1164	AA308091	Sequence 1216	AA336412
Sequence 1165	AA513597	Sequence 1217	H58571
Sequence 1166	AA442287	Sequence 1218	AA186364
Sequence 1167	AW084125	Sequence 1219	AA398463
Sequence 1168	AI274700	Sequence 1220	AA017500
Sequence 1169	AW138181	Sequence 1221	AW088608
Sequence 1170	AA576425	Sequence 1222	AA493183
Sequence 1171	AA304651	Sequence 1223	AI240899
Sequence 1172	AI285435	Sequence 1224	R55600
Sequence 1173	AI279882	Sequence 1225	AA464568
Sequence 1174	AA313778	Sequence 1226	AF001542
Sequence 1175	AI366381	Sequence 1227	AA384987
Sequence 1176	AI340044	Sequence 1228	AA188771
Sequence 1177	AL039293	Sequence 1229	AA234050
Sequence 1178	C18181	Sequence 1230	AI557495
Sequence 1179	AA449649	Sequence 1231	AW080196
Sequence 1180	AA312605	Sequence 1232	AA418719
Sequence 1181	AA046577	Sequence 1233	AA225294
Sequence 1182	AI075037	Sequence 1234	AA812993
Sequence 1183	AI421027	Sequence 1235	AA312689
Sequence 1184	AA781086	Sequence 1236	H13891
Sequence 1185	AA825512	Sequence 1237	T77631
Sequence 1186	AA205546	Sequence 1238	AA311905
Sequence 1187	AA027882	Sequence 1239	AI203546
Sequence 1188	AA810418	Sequence 1240	AI435606
Sequence 1189	AA348878	Sequence 1241	AA143170
Sequence 1190	AA281653	Sequence 1242	AL037316
Sequence 1191	H17170	Sequence 1243	AI205868
Sequence 1192	AA195751	Sequence 1244	AW103458
Sequence 1193	AA364261	Sequence 1245	W90519
Sequence 1194	AA235838	Sequence 1246	AI367641
Sequence 1195	AA503943	Sequence 1247	AA394298

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Sequence 1248	AA167826	Sequence 1300	U14528
Sequence 1249	AA322540	Sequence 1301	AF153608
Sequence 1250	AI253192	Sequence 1302	U57847
Sequence 1251	AA843531	Sequence 1303	AL049276
Sequence 1252	AA203110	Sequence 1304	AF124438
Sequence 1253	AI690278	Sequence 1305	AF007144
Sequence 1254	AA506323	Sequence 1306	L01100
Sequence 1255	AA406478	Sequence 1307	AF056617
Sequence 1256	AI816058	Sequence 1308	U57877
Sequence 1257	AA149219	Sequence 1309	X74331
Sequence 1258	AW176020	Sequence 1310	S82081
Sequence 1259	AA507792	Sequence 1311	AF115402
Sequence 1260	AA468839	Sequence 1312	M29366
Sequence 1261	AA195151	Sequence 1313	X04106
Sequence 1262	AA070277	Sequence 1314	AF151103
Sequence 1263	T08287	Sequence 1315	S75755
Sequence 1264	AA130555	Sequence 1316	X76057
Sequence 1265	AL122121	Sequence 1317	AF070641
Sequence 1266	AF112481	Sequence 1318	X78933
Sequence 1267	AF051334	Sequence 1319	AF006083
Sequence 1268	U61397	Sequence 1320	S73498
Sequence 1269	AF116827	Sequence 1321	AB022663
Sequence 1270	AB029020	Sequence 1322	X94910
Sequence 1271	AL110183	Sequence 1323	X01742
Sequence 1272	AB020636	Sequence 1324	AB020633
Sequence 1273	AF000986	Sequence 1325	D14043
Sequence 1274	D86326	Sequence 1326	L10284
Sequence 1275	AJ005016	Sequence 1327	X15729
Sequence 1276	AB020637	Sequence 1328	AB020680
Sequence 1277	AL110159	Sequence 1329	X59892
Sequence 1278	D21209	Sequence 1330	U77396
Sequence 1279	L07077	Sequence 1331	U84138
Sequence 1280	X74801	Sequence 1332	AB007873
Sequence 1281	AB015333	Sequence 1333	D87442
Sequence 1282	AB011119	Sequence 1334	D42045
Sequence 1283	Y11395	Sequence 1335	AF008442
Sequence 1284	AB029028	Sequence 1336	AJ002955
Sequence 1285	AF054179	Sequence 1337	M94856
Sequence 1286	M21895	Sequence 1338	X16940
Sequence 1287	AL080206	Sequence 1339	M36634
Sequence 1288	AL050355	Sequence 1340	AB018266
Sequence 1289	AB006965	Sequence 1341	M17323
Sequence 1290	AL117563	Sequence 1342	X75593
Sequence 1291	X75861	Sequence 1343	J04137
Sequence 1292	D13315	Sequence 1344	AL049969
Sequence 1293	D50420	Sequence 1345	D13641
Sequence 1294	S39329	Sequence 1346	D31886
Sequence 1295	D87444	Sequence 1347	X63563
Sequence 1296	AL117412	Sequence 1348	D63480
Sequence 1297	AF083217	Sequence 1349	AF039918
Sequence 1298	U51903	Sequence 1350	X80910
Sequence 1299	AB014547	Sequence 1351	D87969

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Sequence 1352	Z24724	Sequence 1404	AB019435
Sequence 1353	U47674	Sequence 1405	L41143
Sequence 1354	AB011158	Sequence 1406	AF141327
Sequence 1355	AL050071	Sequence 1407	U80034
Sequence 1356	AB014610	Sequence 1408	AF062318
Sequence 1357	AL050290	Sequence 1409	Y13834
Sequence 1358	AD001528	Sequence 1410	AB024518
Sequence 1359	U67784	Sequence 1411	AB007898
Sequence 1360	L09749	Sequence 1412	U58855
Sequence 1361	X85129	Sequence 1413	K03515
Sequence 1362	AF022913	Sequence 1414	M81757
Sequence 1363	AF131738	Sequence 1415	M60527
Sequence 1364	AJ004913	Sequence 1416	AL110181
Sequence 1365	AB002383	Sequence 1417	M25756
Sequence 1366	J03015	Sequence 1418	AB033061
Sequence 1367	D29954	Sequence 1419	D31770
Sequence 1368	AF069469	Sequence 1420	AB004066
Sequence 1369	AL049996	Sequence 1421	E01932
Sequence 1370	D42044	Sequence 1422	U90909
Sequence 1371	AL080181	Sequence 1423	AF078864
Sequence 1372	AF061258	Sequence 1424	AF047020
Sequence 1373	AL110153	Sequence 1425	J04183
Sequence 1374	AL080202	Sequence 1426	AL050089
Sequence 1375	U19769	Sequence 1427	X57025
Sequence 1376	AB003103	Sequence 1428	D14710
Sequence 1377	L13848	Sequence 1429	A18585
Sequence 1378	M24194	Sequence 1430	AL049932
Sequence 1379	J05480	Sequence 1431	Z50749
Sequence 1380	M16342	Sequence 1432	AB014579
Sequence 1381	AB002365	Sequence 1433	AF000652
Sequence 1382	AF144566	Sequence 1434	X03559
Sequence 1383	AJ001443	Sequence 1435	L37080
Sequence 1384	U54559	Sequence 1436	M29548
Sequence 1385	AF075061	Sequence 1437	AB000468
Sequence 1386	U37143	Sequence 1438	AF061261
Sequence 1387	D79986	Sequence 1439	AF126780
Sequence 1388	AF013758	Sequence 1440	X77196
Sequence 1389	AB020694	Sequence 1441	AB007949
Sequence 1390	AF103804	Sequence 1442	D49490
Sequence 1391	AF052578	Sequence 1443	AF006086
Sequence 1392	AL117599	Sequence 1444	U39657
Sequence 1393	AL110211	Sequence 1445	AF005043
Sequence 1394	AB018342	Sequence 1446	AF053535
Sequence 1395	AF151844	Sequence 1447	AL110141
Sequence 1396	AL050192	Sequence 1448	AF151805
Sequence 1397	X97065	Sequence 1449	AB033049
Sequence 1398	L12168	Sequence 1450	L08437
Sequence 1399	J03143	Sequence 1451	AF020038
Sequence 1400	X59405	Sequence 1452	M74777
Sequence 1401	X76732	Sequence 1453	L31801
Sequence 1402	U36336	Sequence 1454	X60708
Sequence 1403	AF131802	Sequence 1455	AF052124

Table 4-1

Sequence 1456	AF077202	Sequence 1508	M74002
Sequence 1457	E01915	Sequence 1509	D87735
Sequence 1458	M22865	Sequence 1510	L17128
Sequence 1459	M73837	Sequence 1511	D21163
Sequence 1460	U72937	Sequence 1512	AF070523
Sequence 1461	S72481	Sequence 1513	AB011148
Sequence 1462	AB020724	Sequence 1514	L13385
Sequence 1463	AL117621	Sequence 1515	D13988
Sequence 1464	AB019568	Sequence 1516	AL110238
Sequence 1465	L05425	Sequence 1517	D21210
Sequence 1466	AL122097	Sequence 1518	AB011087
Sequence 1467	AF151868	Sequence 1519	AF054284
Sequence 1468	AF085355	Sequence 1520	AF176702
Sequence 1469	AL049471	Sequence 1521	AB004857
Sequence 1470	AL117623	Sequence 1522	D28589
Sequence 1471	AB007956	Sequence 1523	AF035293
Sequence 1472	U88666	Sequence 1524	U53328
Sequence 1473	AF020797	Sequence 1525	X97324
Sequence 1474	U30313	Sequence 1526	M24902
Sequence 1475	U16850	Sequence 1527	AF001433
Sequence 1476	AF032456	Sequence 1528	AF092138
Sequence 1477	AB026723	Sequence 1529	AF131775
Sequence 1478	AF027515	Sequence 1530	AB023224
Sequence 1479	U58913	Sequence 1531	AF084555
Sequence 1480	AL122084	Sequence 1532	D83032
Sequence 1481	Y09305	Sequence 1533	AF038451
Sequence 1482	M14648	Sequence 1534	D00422
Sequence 1483	AF126181	Sequence 1535	D13388
Sequence 1484	L14778	Sequence 1536	U51134
Sequence 1485	D87845	Sequence 1537	L16510
Sequence 1486	AF047489	Sequence 1538	E01650
Sequence 1487	D26485	Sequence 1539	E02628
Sequence 1488	X73608	Sequence 1540	U62434
Sequence 1489	U64820	Sequence 1541	J02923
Sequence 1490	D89053	Sequence 1542	U60975
Sequence 1491	AF012073	Sequence 1543	U79278
Sequence 1492	AJ002744	Sequence 1544	AF167572
Sequence 1493	D31883	Sequence 1545	AF169797
Sequence 1494	U01923	Sequence 1546	M23161
Sequence 1495	AB018331	Sequence 1547	M33197
Sequence 1496	AB019563	Sequence 1548	D87682
Sequence 1497	U41813	Sequence 1549	AF125392
Sequence 1498	M61199	Sequence 1550	AF064257
Sequence 1499	M22538	Sequence 1551	U00946
Sequence 1500	AF025998	Sequence 1552	S70290
Sequence 1501	AL049944	Sequence 1553	AB019691
Sequence 1502	AB007963	Sequence 1554	J03537
Sequence 1503	AB006968	Sequence 1555	D38305
Sequence 1504	AF077037	Sequence 1556	D14697
Sequence 1505	U43701	Sequence 1557	AF147354
Sequence 1506	E05957	Sequence 1558	AB018330
Sequence 1507	AF103907	Sequence 1559	D50372

Table 4-1

Sequence 1560	D12676	Sequence 1612	U39064
Sequence 1561	AF098297	Sequence 1613	U17714
Sequence 1562	X81900	Sequence 1614	U42412
Sequence 1563	X56932	Sequence 1615	D43947
Sequence 1564	U53468	Sequence 1616	AF100759
Sequence 1565	AF165281	Sequence 1617	AB019564
Sequence 1566	U12979	Sequence 1618	D63998
Sequence 1567	AF188746	Sequence 1619	AL050265
Sequence 1568	D49489	Sequence 1620	AB033078
Sequence 1569	M24630	Sequence 1621	X77548
Sequence 1570	D31885	Sequence 1622	U00947
Sequence 1571	AL117441	Sequence 1623	X94323
Sequence 1572	M21896	Sequence 1624	E03569
Sequence 1573	S78203	Sequence 1625	L25899
Sequence 1574	AF004561	Sequence 1626	Z47553
Sequence 1575	U21936	Sequence 1627	AF155110
Sequence 1576	D86985	Sequence 1628	AF075587
Sequence 1577	AL050064	Sequence 1629	AB021288
Sequence 1578	AB028956	Sequence 1630	D14665
Sequence 1579	E07798	Sequence 1631	AB014598
Sequence 1580	AB023230	Sequence 1632	X57398
Sequence 1581	AB023182	Sequence 1633	D87450
Sequence 1582	AB028948	Sequence 1634	AF132941
Sequence 1583	AF054182	Sequence 1635	M21154
Sequence 1584	AF091263	Sequence 1636	A17362
Sequence 1585	U10439	Sequence 1637	AF070664
Sequence 1586	L49399	Sequence 1638	AF151873
Sequence 1587	D50645	Sequence 1639	D63486
Sequence 1588	AF131749	Sequence 1640	AJ000644
Sequence 1589	AF013759	Sequence 1641	L38961
Sequence 1590	AF097535	Sequence 1642	AF042166
Sequence 1591	Y12860	Sequence 1643	AF078847
Sequence 1592	X60489	Sequence 1644	AJ130733
Sequence 1593	Z48042	Sequence 1645	X54326
Sequence 1594	U79751	Sequence 1646	J04208
Sequence 1595	U81602	Sequence 1647	AF188745
Sequence 1596	L19161	Sequence 1648	U18422
Sequence 1597	D13866	Sequence 1649	J02888
Sequence 1598	U02493	Sequence 1650	D63477
Sequence 1599	U03274	Sequence 1651	E03414
Sequence 1600	Z36785	Sequence 1652	AB015639
Sequence 1601	AF070655	Sequence 1653	AF040707
Sequence 1602	J04794	Sequence 1654	M61831
Sequence 1603	AF039029	Sequence 1655	U39360
Sequence 1604	Z22534	Sequence 1656	AL050255
Sequence 1605	M10036	Sequence 1657	U73824
Sequence 1606	AF131831	Sequence 1658	Y00281
Sequence 1607	AF068754	Sequence 1659	U41515
Sequence 1608	AL049367	Sequence 1660	AF100761
Sequence 1609	X53793	Sequence 1661	AF151855
Sequence 1610	AF070553	Sequence 1662	AB007618
Sequence 1611	AB018281	Sequence 1663	AF055994



Table 4-1

Sequence 1664	AF047472	Sequence 1716	Y12065
Sequence 1665	D78152	Sequence 1717	M85168
Sequence 1666	AJ237946	Sequence 1718	L11066
Sequence 1667	E08293	Sequence 1719	AF016270
Sequence 1668	D28473	Sequence 1720	D21262
Sequence 1669	AB018358	Sequence 1721	M16660
Sequence 1670	AF048731	Sequence 1722	AL117443
Sequence 1671	U90551	Sequence 1723	D50916
Sequence 1672	AF070561	Sequence 1724	U68536
Sequence 1673	M17885	Sequence 1725	J05192
Sequence 1674	M74524	Sequence 1726	D87667
Sequence 1675	AB000220	Sequence 1727	AB028973
Sequence 1676	AB020639	Sequence 1728	AF106943
Sequence 1677	AF053977	Sequence 1729	U18197
Sequence 1678	D88532	Sequence 1730	Y14738
Sequence 1679	AF007216	Sequence 1731	AF159056
Sequence 1680	X05332	Sequence 1732	U48857
Sequence 1681	U24105	Sequence 1733	X04297
Sequence 1682	AB002387	Sequence 1734	AB011165
Sequence 1683	AB007957	Sequence 1735	AF097159
Sequence 1684	AL117666	Sequence 1736	X15949
Sequence 1685	AL049951	Sequence 1737	D84105
Sequence 1686	L07540	Sequence 1738	AF125096
Sequence 1687	AL110242	Sequence 1739	AF053551
Sequence 1688	AF078861	Sequence 1740	AF007149
Sequence 1689	AF153612	Sequence 1741	AJ224326
Sequence 1690	M17254	Sequence 1742	M55543
Sequence 1691	D86967	Sequence 1743	AB032948
Sequence 1692	AB014548	Sequence 1744	AF091076
Sequence 1693	U20157	Sequence 1745	AF065391
Sequence 1694	AF022229	Sequence 1746	L13977
Sequence 1695	AL050051	Sequence 1747	M87284
Sequence 1696	AB033071	Sequence 1748	AB002382
Sequence 1697	AF052093	Sequence 1749	Z82022
Sequence 1698	Z13009	Sequence 1750	AF151908
Sequence 1699	AF156965	Sequence 1751	AL050107
Sequence 1700	AB018334	Sequence 1752	AF027824
Sequence 1701	M14328	Sequence 1753	AF144755
Sequence 1702	U17104	Sequence 1754	AL080201
Sequence 1703	U10117	Sequence 1755	AF089747
Sequence 1704	AL117567	Sequence 1756	D13119
Sequence 1705	AL080097	Sequence 1757	AF146277
Sequence 1706	AF151840	Sequence 1758	AF170583
Sequence 1707	U09848	Sequence 1759	AL050298
Sequence 1708	AB001872	Sequence 1760	M18366
Sequence 1709	AL050373	Sequence 1761	Y00282
Sequence 1710	AB018270	Sequence 1762	J04823
Sequence 1711	AF167160	Sequence 1763	AL110214
Sequence 1712	AB033091	Sequence 1764	AL080088
Sequence 1713	AB018296	Sequence 1765	AF100755
Sequence 1714	M22918	Sequence 1766	AF078860
Sequence 1715	L05186	Sequence 1767	U03886

Table 4-1

Sequence 1768	L07033	Sequence 1820	D38555
Sequence 1769	U07919	Sequence 1821	D28540
Sequence 1770	D13629	Sequence 1822	AF191298
Sequence 1771	AF191018	Sequence 1823	AF042346
Sequence 1772	X04697	Sequence 1824	E01956
Sequence 1773	X81109	Sequence 1825	X70394
Sequence 1774	AL079298	Sequence 1826	U41060
Sequence 1775	X56958	Sequence 1827	AB000887
Sequence 1776	AL110126	Sequence 1828	U25182
Sequence 1777	X63679	Sequence 1829	X87241
Sequence 1778	X17620	Sequence 1830	AB007972
Sequence 1779	A21185	Sequence 1831	M63573
Sequence 1780	AF087942	Sequence 1832	X07270
Sequence 1781	E01954	Sequence 1833	AF124439
Sequence 1782	AF077200	Sequence 1834	D50406
Sequence 1783	D87078	Sequence 1835	J04443
Sequence 1784	AL050272	Sequence 1836	D21260
Sequence 1785	M21897	Sequence 1837	X15187
Sequence 1786	U90144	Sequence 1838	D89092
Sequence 1787	D14696	Sequence 1839	K03002
Sequence 1788	M20372	Sequence 1840	AF035286
Sequence 1789	AF085845	Sequence 1841	M83822
Sequence 1790	AB033114	Sequence 1842	M55409
Sequence 1791	E01497	Sequence 1843	AB007885
Sequence 1792	AB007510	Sequence 1844	AL050198
Sequence 1793	D87666	Sequence 1845	M26481
Sequence 1794	D38524	Sequence 1846	M27544
Sequence 1795	E00882	Sequence 1847	X83544
Sequence 1796	X02875	Sequence 1848	D14812
Sequence 1797	AF085224	Sequence 1849	AF056433
Sequence 1798	AF071076	Sequence 1850	Z23064
Sequence 1799	AF102850	Sequence 1851	AB032983
Sequence 1800	AB002369	Sequence 1852	AL117514
Sequence 1801	AB011004	Sequence 1853	X59131
Sequence 1802	AL050289	Sequence 1854	AF073475
Sequence 1803	S41458	Sequence 1855	AF044954
Sequence 1804	AF088004	Sequence 1856	X60221
Sequence 1805	AF086431	Sequence 1857	AB007882
Sequence 1806	AF010233	Sequence 1858	AF082513
Sequence 1807	AF086336	Sequence 1859	AF071202
Sequence 1808	AF057705	Sequence 1860	M26383
Sequence 1809	AB018280	Sequence 1861	X57351
Sequence 1810	AF016496	Sequence 1862	AF007142
Sequence 1811	M26663	Sequence 1863	AF020202
Sequence 1812	M17886	Sequence 1864	AB020686
Sequence 1813	X07466	Sequence 1865	X91257
Sequence 1814	D31767	Sequence 1866	D32051
Sequence 1815	L05779	Sequence 1867	AF147339
Sequence 1816	U07809	Sequence 1868	AB002306
Sequence 1817	AF137334	Sequence 1869	AF100756
Sequence 1818	AF056322	Sequence 1870	U01925
Sequence 1819	AB001636	Sequence 1871	D14878

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Sequence 1872	M22590	Sequence 1924	X27262
Sequence 1873	M93651	Sequence 1925	T59274
Sequence 1874	AF054838	Sequence 1926	V69358
Sequence 1875	M69066	Sequence 1927	X98998
Sequence 1876	AF017269	Sequence 1928	Z10658
Sequence 1877	J03007	Sequence 1929	X76578
Sequence 1878	AF019214	Sequence 1930	Z06652
Sequence 1879	AF039023	Sequence 1931	T37414
Sequence 1880	X66276	Sequence 1932	V56670
Sequence 1881	AL110179	Sequence 1933	V58682
Sequence 1882	D86984	Sequence 1934	Z15583
Sequence 1883	D90226	Sequence 1935	T18813
Sequence 1884	AL035304	Sequence 1936	X22116
Sequence 1885	D13643	Sequence 1937	T61701
Sequence 1886	K01911	Sequence 1938	Z00842
Sequence 1887	L28997	Sequence 1939	V58756
Sequence 1888	AB023173	Sequence 1940	V57903
Sequence 1889	Y00971	Sequence 1941	X03841
Sequence 1890	AB033899	Sequence 1942	Z17335
Sequence 1891	U90550	Sequence 1943	X26850
Sequence 1892	M10119	Sequence 1944	Z33658
Sequence 1893	AL133078	Sequence 1945	Z14392
Sequence 1894	J04607	Sequence 1946	V63172
Sequence 1895	J02642	Sequence 1947	Z15729
Sequence 1896	A06919	Sequence 1948	V34236
Sequence 1897	M34181	Sequence 1949	AC31081
Sequence 1898	Z46973	Sequence 1950	AC35659
Sequence 1899	AF038404	Sequence 1951	AC36156
Sequence 1900	AF083441	Sequence 1952	AC33865
Sequence 1901	AF107405	Sequence 1953	AC36153
Sequence 1902	AF201077	Sequence 1954	AC29851
Sequence 1903	U02680	Sequence 1955	AC36206
Sequence 1904	L08599	Sequence 1956	AC36220
Sequence 1905	AF019226	Sequence 1957	AC36078
Sequence 1906	AF176574	Sequence 1958	AC36205
Sequence 1907	AB028977	Sequence 1959	AC35218
Sequence 1908	AJ000881	Sequence 1960	AC36180
Sequence 1909	D89678	Sequence 1961	AC36187
Sequence 1910	D50405	Sequence 1962	AC36079
Sequence 1911	D29641	Sequence 1963	AC36823
Sequence 1912	M34840	Sequence 1964	AC36709
Sequence 1913	V62427	Sequence 1965	AA304651
Sequence 1914	V62430	Sequence 1966	AA308091
Sequence 1915	X20432	Sequence 1967	AA442287
Sequence 1916	V87930	Sequence 1968	AA460440
Sequence 1917	V58694	Sequence 1969	AA513597
Sequence 1918	X98608	Sequence 1970	AA576425
Sequence 1919	Z15132	Sequence 1971	AB032983
Sequence 1920	V58628	Sequence 1972	AF047020
Sequence 1921	Q97526	Sequence 1973	AF103907
Sequence 1922	X25445	Sequence 1974	AI080439
Sequence 1923	X04318	Sequence 1975	AI088633

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Sequence 1976	AI267321	Sequence 2028	AA663192
Sequence 1977	AI274700	Sequence 2029	AA449889
Sequence 1978	AI557336	Sequence 2030	AA209369
Sequence 1979	AI825988	Sequence 2031	AA354730
Sequence 1980	AL037105	Sequence 2032	AA354196
Sequence 1981	AW138181	Sequence 2033	AI791370
Sequence 1982	D14043	Sequence 2034	AA447433
Sequence 1983	L38961	Sequence 2035	N44743
Sequence 1984	M26880	Sequence 2036	AA528104
Sequence 1985	X77548	Sequence 2037	AA853882
Sequence 1986	AB001636	Sequence 2038	AA134726
Sequence 1987	AB008681	Sequence 2039	AA811333
Sequence 1988	AB020866	Sequence 2040	AL121340
Sequence 1989	AC000399	Sequence 2041	AA310201
Sequence 1990	AC002086	Sequence 2042	AI694572
Sequence 1991	AC003991	Sequence 2043	AI140921
Sequence 1992	AC004507	Sequence 2044	AA149579
Sequence 1993	AC004816	Sequence 2045	AA506729
Sequence 1994	AC005383	Sequence 2046	AA877460
Sequence 1995	AC005480	Sequence 2047	AI199094
Sequence 1996	AC005538	Sequence 2048	AA975275
Sequence 1997	AC005831	Sequence 2049	N25122
Sequence 1998	AC006153	Sequence 2050	AI636911
Sequence 1999	AL031777	Sequence 2051	AI219803
Sequence 2000	AL117340	Sequence 2052	AA483044
Sequence 2001	AL121603	Sequence 2053	AA522552
Sequence 2002	AL121654	Sequence 2054	AI564822
Sequence 2003	AL122007	Sequence 2055	R63251
Sequence 2004	AL135879	Sequence 2056	AA526369
Sequence 2005	AP000303	Sequence 2057	AI074652
Sequence 2006	M11548	Sequence 2058	AA603861
Sequence 2007	S65371	Sequence 2059	AA253339
Sequence 2008	U13800	Sequence 2060	AA313170
Sequence 2009	U91321	Sequence 2061	AA228940
Sequence 2010	Z63584	Sequence 2062	AF001542
Sequence 2011	Z73900	Sequence 2063	AI090642
Sequence 2012	AA079188	Sequence 2064	AA035559
Sequence 2013	AI267838	Sequence 2065	AA304845
Sequence 2014	AA507791	Sequence 2066	AI652112
Sequence 2015	AA640474	Sequence 2067	AA058381
Sequence 2016	AI023483	Sequence 2068	AA935526
Sequence 2017	AI201484	Sequence 2069	AA588023
Sequence 2018	AA325789	Sequence 2070	AI034131
Sequence 2019	AI151458	Sequence 2071	AA577463
Sequence 2020	AA393870	Sequence 2072	AW151704
Sequence 2021	H70269	Sequence 2073	AI267285
Sequence 2022	AA226321	Sequence 2074	AA531386
Sequence 2023	W58683	Sequence 2075	AA493331
Sequence 2024	AL043205	Sequence 2076	AL043046
Sequence 2025	AA056482	Sequence 2077	AI373120
Sequence 2026	H59731	Sequence 2078	AI017239
Sequence 2027	R69940	Sequence 2079	AA149337

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Sequence 2080	AA62248	Sequence 2132	AA269205
Sequence 2081	AA23214	Sequence 2133	AI754013
Sequence 2082	AI453181	Sequence 2134	AA336412
Sequence 2083	AL121262	Sequence 2135	AW148750
Sequence 2084	AA306322	Sequence 2136	AA304846
Sequence 2085	AI635209	Sequence 2137	AA190998
Sequence 2086	AA973620	Sequence 2138	AA564505
Sequence 2087	AA323181	Sequence 2139	AI086059
Sequence 2088	AA399177	Sequence 2140	AA235224
Sequence 2089	R33609	Sequence 2141	AA405663
Sequence 2090	AW149706	Sequence 2142	C21370
Sequence 2091	AA878395	Sequence 2143	AI253335
Sequence 2092	AI198859	Sequence 2144	AA437224
Sequence 2093	AA099399	Sequence 2145	AA314893
Sequence 2094	AA467869	Sequence 2146	AI630616
Sequence 2095	AA747909	Sequence 2147	W27229
Sequence 2096	AA483008	Sequence 2148	AA195525
Sequence 2097	N51806	Sequence 2149	AI868421
Sequence 2098	AA548764	Sequence 2150	AA305969
Sequence 2099	AA229495	Sequence 2151	AI476310
Sequence 2100	AL046322	Sequence 2152	AA843845
Sequence 2101	AA146981	Sequence 2153	AI204916
Sequence 2102	AA152337	Sequence 2154	AA172043
Sequence 2103	AA280917	Sequence 2155	AI557235
Sequence 2104	AL043257	Sequence 2156	AA020899
Sequence 2105	AA026149	Sequence 2157	AI954167
Sequence 2106	AA732538	Sequence 2158	AI380932
Sequence 2107	AA876439	Sequence 2159	AI267502
Sequence 2108	AA405535	Sequence 2160	H30141
Sequence 2109	H80936	Sequence 2161	AA634408
Sequence 2110	AI378290	Sequence 2162	AA031287
Sequence 2111	AI761098	Sequence 2163	AA233109
Sequence 2112	AA188875	Sequence 2164	AA150421
Sequence 2113	AA703396	Sequence 2165	AA088714
Sequence 2114	AA312076	Sequence 2166	AA523354
Sequence 2115	AA424428	Sequence 2167	AI809963
Sequence 2116	T68102	Sequence 2168	AA130302
Sequence 2117	AA011621	Sequence 2169	AI831502
Sequence 2118	AA285038	Sequence 2170	AA742522
Sequence 2119	AA506459	Sequence 2171	AA716414
Sequence 2120	AA523252	Sequence 2172	AA557260
Sequence 2121	AA522850	Sequence 2173	AA291260
Sequence 2122	AA159272	Sequence 2174	AA376424
Sequence 2123	AA195010	Sequence 2175	AA807370
Sequence 2124	N72922	Sequence 2176	H48050
Sequence 2125	AW073731	Sequence 2177	AA320603
Sequence 2126	H25806	Sequence 2178	AI125653
Sequence 2127	D55192	Sequence 2179	AA058899
Sequence 2128	N52271	Sequence 2180	AA016281
Sequence 2129	AA046581	Sequence 2181	AL038234
Sequence 2130	AA579026	Sequence 2182	H08621
Sequence 2131	AA764981	Sequence 2183	AA703816

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Sequence 2184	AA487754	Sequence 2236	AA531227
Sequence 2185	AI217694	Sequence 2237	AA402408
Sequence 2186	AI671394	Sequence 2238	AA132904
Sequence 2187	AA516531	Sequence 2239	AI310138
Sequence 2188	AA322901	Sequence 2240	AI267216
Sequence 2189	AA188140	Sequence 2241	AA180941
Sequence 2190	AI689722	Sequence 2242	AL046640
Sequence 2191	AA599324	Sequence 2243	AA504490
Sequence 2192	H08959	Sequence 2244	AA150220
Sequence 2193	AA308316	Sequence 2245	AA047021
Sequence 2194	N23606	Sequence 2246	AA450051
Sequence 2195	AI620796	Sequence 2247	H78478
Sequence 2196	AL043048	Sequence 2248	AA225115
Sequence 2197	H02308	Sequence 2249	C04910
Sequence 2198	AI093387	Sequence 2250	AI114467
Sequence 2199	AA186586	Sequence 2251	N56690
Sequence 2200	AI697815	Sequence 2252	AA992882
Sequence 2201	AA130271	Sequence 2253	AA173184
Sequence 2202	AA678072	Sequence 2254	AA306787
Sequence 2203	AA468411	Sequence 2255	AW157303
Sequence 2204	AW177204	Sequence 2256	AA576425
Sequence 2205	AL045638	Sequence 2257	AA634120
Sequence 2206	N21237	Sequence 2258	AA675892
Sequence 2207	AA157008	Sequence 2259	AA056667
Sequence 2208	AA150672	Sequence 2260	AI087300
Sequence 2209	C19105	Sequence 2261	AW170355
Sequence 2210	AI066442	Sequence 2262	N92755
Sequence 2211	AA091998	Sequence 2263	AA009531
Sequence 2212	AI267522	Sequence 2264	AA830807
Sequence 2213	AA071167	Sequence 2265	AA081082
Sequence 2214	AI269747	Sequence 2266	AA598531
Sequence 2215	AA453345	Sequence 2267	W84471
Sequence 2216	AA876668	Sequence 2268	AI053597
Sequence 2217	AA454208	Sequence 2269	AA002222
Sequence 2218	AA857069	Sequence 2270	AA128591
Sequence 2219	AA765712	Sequence 2271	AW028937
Sequence 2220	AA280256	Sequence 2272	AA503943
Sequence 2221	AA361640	Sequence 2273	AA664480
Sequence 2222	AA256403	Sequence 2274	AA101155
Sequence 2223	AA039967	Sequence 2275	AA843176
Sequence 2224	AA476586	Sequence 2276	AI216969
Sequence 2225	AA147100	Sequence 2277	AA313369
Sequence 2226	AI267612	Sequence 2278	AI217172
Sequence 2227	AA652925	Sequence 2279	AA312669
Sequence 2228	AI564506	Sequence 2280	AA501739
Sequence 2229	AI682937	Sequence 2281	AA151012
Sequence 2230	AA040135	Sequence 2282	AA994993
Sequence 2231	AA114853	Sequence 2283	AI133247
Sequence 2232	AI971281	Sequence 2284	AA187576
Sequence 2233	AA534246	Sequence 2285	AA329562
Sequence 2234	AA205647	Sequence 2286	AA442517
Sequence 2235	AA351504	Sequence 2287	AL044723

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Sequence 2288	AA188591	Sequence 2340	AA465509
Sequence 2289	AW176649	Sequence 2341	AA150361
Sequence 2290	AA286678	Sequence 2342	AA449940
Sequence 2291	H96926	Sequence 2343	W26008
Sequence 2292	AA426229	Sequence 2344	AA194162
Sequence 2293	AA527805	Sequence 2345	AA244003
Sequence 2294	AL040354	Sequence 2346	AF150208
Sequence 2295	AA314146	Sequence 2347	AA701467
Sequence 2296	AA190408	Sequence 2348	AA128387
Sequence 2297	AA457720	Sequence 2349	AA226171
Sequence 2298	AA837457	Sequence 2350	AA215927
Sequence 2299	AI400752	Sequence 2351	AA535837
Sequence 2300	AA143012	Sequence 2352	N23010
Sequence 2301	AA541528	Sequence 2353	AA205870
Sequence 2302	AA610052	Sequence 2354	R72403
Sequence 2303	AA128348	Sequence 2355	AI791998
Sequence 2304	AA309749	Sequence 2356	AA252943
Sequence 2305	AI479009	Sequence 2357	AL047776
Sequence 2306	R35797	Sequence 2358	AA190873
Sequence 2307	AA044791	Sequence 2359	AA838748
Sequence 2308	AI984636	Sequence 2360	AA316110
Sequence 2309	R70639	Sequence 2361	AA281132
Sequence 2310	AA480551	Sequence 2362	AA310609
Sequence 2311	AW131127	Sequence 2363	AA082936
Sequence 2312	AA477683	Sequence 2364	AA354742
Sequence 2313	AA366269	Sequence 2365	AI697599
Sequence 2314	AI480345	Sequence 2366	AA927433
Sequence 2315	AA476487	Sequence 2367	AI557231
Sequence 2316	AA037574	Sequence 2368	AL039814
Sequence 2317	AI267254	Sequence 2369	AA984384
Sequence 2318	AA336621	Sequence 2370	AA043865
Sequence 2319	AI659354	Sequence 2371	AA491866
Sequence 2320	AA114078	Sequence 2372	AA411736
Sequence 2321	AA371964	Sequence 2373	AA083370
Sequence 2322	AA551464	Sequence 2374	AA863393
Sequence 2323	AA455475	Sequence 2375	AA994857
Sequence 2324	H61016	Sequence 2376	AI741633
Sequence 2325	AA121625	Sequence 2377	AI077641
Sequence 2326	AA206356	Sequence 2378	AI720603
Sequence 2327	AA932569	Sequence 2379	AA488633
Sequence 2328	AA352179	Sequence 2380	AA780695
Sequence 2329	R15870	Sequence 2381	AA683080
Sequence 2330	AA223320	Sequence 2382	AW023372
Sequence 2331	AA714022	Sequence 2383	R88918
Sequence 2332	AA648989	Sequence 2384	H11678
Sequence 2333	AA166952	Sequence 2385	AA127220
Sequence 2334	AI923627	Sequence 2386	AA261889
Sequence 2335	AA315416	Sequence 2387	AA699442
Sequence 2336	AA130890	Sequence 2388	AA713504
Sequence 2337	AI253379	Sequence 2389	AA658393
Sequence 2338	AA584428	Sequence 2390	AI199681
Sequence 2339	AI147850	Sequence 2391	H20388

Table 4-1

Sequence 2392	AI375141	Sequence 2444	AI970919
Sequence 2393	N63784	Sequence 2445	AL039208
Sequence 2394	AA193086	Sequence 2446	AI557336
Sequence 2395	AA180137	Sequence 2447	AA459455
Sequence 2396	AI458673	Sequence 2448	AA476360
Sequence 2397	AA101742	Sequence 2449	AI080272
Sequence 2398	AI028097	Sequence 2450	AI025262
Sequence 2399	AA865185	Sequence 2451	H03785
Sequence 2400	AA071199	Sequence 2452	AA305627
Sequence 2401	AA479962	Sequence 2453	AA082342
Sequence 2402	AA133652	Sequence 2454	AA186755
Sequence 2403	AA916145	Sequence 2455	AA086128
Sequence 2404	AA167677	Sequence 2456	AI682362
Sequence 2405	AA904265	Sequence 2457	AA280952
Sequence 2406	AL040264	Sequence 2458	AA225294
Sequence 2407	AA243143	Sequence 2459	AI634740
Sequence 2408	AI093458	Sequence 2460	AA364913
Sequence 2409	AA045381	Sequence 2461	AA226266
Sequence 2410	AA736613	Sequence 2462	AA287720
Sequence 2411	W04240	Sequence 2463	AA883914
Sequence 2412	AI632534	Sequence 2464	AA508861
Sequence 2413	AA651712	Sequence 2465	AA436573
Sequence 2414	AA748064	Sequence 2466	AA937212
Sequence 2415	AA554358	Sequence 2467	AA639174
Sequence 2416	AA229199	Sequence 2468	AI878918
Sequence 2417	AA001805	Sequence 2469	AA173522
Sequence 2418	AA040437	Sequence 2470	AA469129
Sequence 2419	AA340635	Sequence 2471	AA320034
Sequence 2420	AI911776	Sequence 2472	AI755085
Sequence 2421	AA366876	Sequence 2473	AI242701
Sequence 2422	AA806448	Sequence 2474	AA431018
Sequence 2423	AA468167	Sequence 2475	AA478539
Sequence 2424	AA233791	Sequence 2476	AA531255
Sequence 2425	AA315582	Sequence 2477	AI080480
Sequence 2426	AA400296	Sequence 2478	AA669300
Sequence 2427	AA526097	Sequence 2479	AA476725
Sequence 2428	AI623804	Sequence 2480	AI557626
Sequence 2429	AA629033	Sequence 2481	AA477728
Sequence 2430	AI142083	Sequence 2482	AW157674
Sequence 2431	AA156239	Sequence 2483	AA592908
Sequence 2432	AA134016	Sequence 2484	AA932402
Sequence 2433	AA814500	Sequence 2485	AA308051
Sequence 2434	AA041239	Sequence 2486	AI686325
Sequence 2435	AI148251	Sequence 2487	AI951118
Sequence 2436	AA258904	Sequence 2488	AI768568
Sequence 2437	AA315943	Sequence 2489	AL041012
Sequence 2438	AI654183	Sequence 2490	AA557683
Sequence 2439	AA890032	Sequence 2491	AI207528
Sequence 2440	AL118582	Sequence 2492	AA133276
Sequence 2441	AA127136	Sequence 2493	AA167366
Sequence 2442	AI267554	Sequence 2494	AI923011
Sequence 2443	AA457041	Sequence 2495	AL048954



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Sequence 2496	AW003952	Sequence 2548	AA545726
Sequence 2497	AA988520	Sequence 2549	AA993438
Sequence 2498	AA995613	Sequence 2550	AA040439
Sequence 2499	AL047056	Sequence 2551	AA176847
Sequence 2500	AA187710	Sequence 2552	H16224
Sequence 2501	AI636628	Sequence 2553	AA410965
Sequence 2502	AA315805	Sequence 2554	AI005274
Sequence 2503	AI570859	Sequence 2555	AI129280
Sequence 2504	AA425908	Sequence 2556	AA101224
Sequence 2505	AA765947	Sequence 2557	AI244140
Sequence 2506	F13179	Sequence 2558	AI798840
Sequence 2507	AA534505	Sequence 2559	AL079982
Sequence 2508	AA375164	Sequence 2560	AA316181
Sequence 2509	AA205996	Sequence 2561	AI267570
Sequence 2510	AL118746	Sequence 2562	AA779602
Sequence 2511	AA652600	Sequence 2563	AA577585
Sequence 2512	AA568488	Sequence 2564	AA205949
Sequence 2513	AA994966	Sequence 2565	AI265881
Sequence 2514	AA443447	Sequence 2566	W87865
Sequence 2515	AA165205	Sequence 2567	H13406
Sequence 2516	AA070250	Sequence 2568	AA766050
Sequence 2517	AI961028	Sequence 2569	AA610444
Sequence 2518	AI200245	Sequence 2570	AA447343
Sequence 2519	AI801373	Sequence 2571	AA293873
Sequence 2520	AA336387	Sequence 2572	AA490910
Sequence 2521	AA740911	Sequence 2573	AA742189
Sequence 2522	H20744	Sequence 2574	AA158507
Sequence 2523	AA316423	Sequence 2575	AA370116
Sequence 2524	AA094656	Sequence 2576	AA081712
Sequence 2525	AA902953	Sequence 2577	AA357574
Sequence 2526	AA532852	Sequence 2578	AA317455
Sequence 2527	AA224487	Sequence 2579	AA455668
Sequence 2528	AL035985	Sequence 2580	AI080439
Sequence 2529	AI738488	Sequence 2581	AI381649
Sequence 2530	AA335563	Sequence 2582	AA225843
Sequence 2531	AA580417	Sequence 2583	AA342832
Sequence 2532	AA425062	Sequence 2584	AA447322
Sequence 2533	AA464941	Sequence 2585	AA505594
Sequence 2534	AA305143	Sequence 2586	AA172195
Sequence 2535	AA402721	Sequence 2587	AA526214
Sequence 2536	AI620924	Sequence 2588	AI474235
Sequence 2537	AA026343	Sequence 2589	AW023413
Sequence 2538	AA156690	Sequence 2590	AA112308
Sequence 2539	AA102570	Sequence 2591	AA476756
Sequence 2540	R70675	Sequence 2592	AA317040
Sequence 2541	AA503719	Sequence 2593	W05472
Sequence 2542	AA021513	Sequence 2594	AA256591
Sequence 2543	AI458521	Sequence 2595	AA311125
Sequence 2544	AL037053	Sequence 2596	AA884249
Sequence 2545	H24356	Sequence 2597	AA401003
Sequence 2546	AW105540	Sequence 2598	AA148780
Sequence 2547	AA255974	Sequence 2599	AA155999

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Sequence 2600	AI557599	Sequence 2652	AL039293
Sequence 2601	AI146340	Sequence 2653	AA211653
Sequence 2602	AA431664	Sequence 2654	AA531563
Sequence 2603	AI753951	Sequence 2655	AA219705
Sequence 2604	AA081169	Sequence 2656	AA449054
Sequence 2605	AA326752	Sequence 2657	R11581
Sequence 2606	H57382	Sequence 2658	AI074308
Sequence 2607	AA385449	Sequence 2659	AA278241
Sequence 2608	AI989530	Sequence 2660	AA844734
Sequence 2609	AA527730	Sequence 2661	AI207660
Sequence 2610	AA632742	Sequence 2662	AA352938
Sequence 2611	AA370507	Sequence 2663	AA357069
Sequence 2612	AA053557	Sequence 2664	N32485
Sequence 2613	AA527326	Sequence 2665	AA481158
Sequence 2614	AA453609	Sequence 2666	AI161350
Sequence 2615	AA506419	Sequence 2667	AI867729
Sequence 2616	AA262226	Sequence 2668	AI075631
Sequence 2617	H54240	Sequence 2669	AA284997
Sequence 2618	AA741050	Sequence 2670	AA394302
Sequence 2619	AI342269	Sequence 2671	AI929611
Sequence 2620	AA339735	Sequence 2672	AI659440
Sequence 2621	AL038549	Sequence 2673	AL037638
Sequence 2622	AA326165	Sequence 2674	AA773998
Sequence 2623	AA641601	Sequence 2675	AA481571
Sequence 2624	AA599078	Sequence 2676	R51737
Sequence 2625	AI914133	Sequence 2677	AA468565
Sequence 2626	AA344131	Sequence 2678	AI823661
Sequence 2627	AI088691	Sequence 2679	AA524672
Sequence 2628	AI400511	Sequence 2680	AI378932
Sequence 2629	AA528202	Sequence 2681	AI458743
Sequence 2630	AA148215	Sequence 2682	T77631
Sequence 2631	AA479976	Sequence 2683	AI052738
Sequence 2632	W61049	Sequence 2684	AA203119
Sequence 2633	AA479860	Sequence 2685	W27182
Sequence 2634	AI401150	Sequence 2686	AI968159
Sequence 2635	H25880	Sequence 2687	AA313684
Sequence 2636	AL036415	Sequence 2688	AI129891
Sequence 2637	AI693198	Sequence 2689	R83716
Sequence 2638	AA256420	Sequence 2690	AA359832
Sequence 2639	AA406594	Sequence 2691	R39716
Sequence 2640	AA594540	Sequence 2692	AA120781
Sequence 2641	AA701667	Sequence 2693	AA480844
Sequence 2642	AA147871	Sequence 2694	AA417097
Sequence 2643	AA192597	Sequence 2695	AW086063
Sequence 2644	AA972792	Sequence 2696	AI791906
Sequence 2645	AA232374	Sequence 2697	AA424456
Sequence 2646	AA234050	Sequence 2698	AA121266
Sequence 2647	AI248721	Sequence 2699	AI249680
Sequence 2648	AA507511	Sequence 2700	AA652478
Sequence 2649	AA503215	Sequence 2701	AA732326
Sequence 2650	H05325	Sequence 2702	AL079681
Sequence 2651	AA453310	Sequence 2703	AA164369

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Sequence 2704	AL040936	Sequence 2756	AA318422
Sequence 2705	AA569482	Sequence 2757	AA135812
Sequence 2706	AA312968	Sequence 2758	R51540
Sequence 2707	AA523498	Sequence 2759	AA188854
Sequence 2708	AA032194	Sequence 2760	AA227830
Sequence 2709	AL047436	Sequence 2761	AA255717
Sequence 2710	AA035102	Sequence 2762	AA365883
Sequence 2711	D81635	Sequence 2763	AA860246
Sequence 2712	AL121423	Sequence 2764	AA069078
Sequence 2713	AA099896	Sequence 2765	AI332588
Sequence 2714	AA177054	Sequence 2766	AA446760
Sequence 2715	AA292158	Sequence 2767	AI033912
Sequence 2716	AA224953	Sequence 2768	H03882
Sequence 2717	AA479444	Sequence 2769	AA298464
Sequence 2718	AI417131	Sequence 2770	AA224994
Sequence 2719	AA115604	Sequence 2771	AA379370
Sequence 2720	R19977	Sequence 2772	AA228273
Sequence 2721	AA464133	Sequence 2773	AA136437
Sequence 2722	AA345189	Sequence 2774	N40598
Sequence 2723	AA503096	Sequence 2775	AA563986
Sequence 2724	AA021115	Sequence 2776	AW022017
Sequence 2725	AA318745	Sequence 2777	AA779728
Sequence 2726	AA190661	Sequence 2778	AA040620
Sequence 2727	R69724	Sequence 2779	AI808684
Sequence 2728	AI144378	Sequence 2780	AA625145
Sequence 2729	AA524651	Sequence 2781	AA862821
Sequence 2730	AA524528	Sequence 2782	AA468839
Sequence 2731	AW138413	Sequence 2783	AA375135
Sequence 2732	AI627356	Sequence 2784	AW169765
Sequence 2733	AA036823	Sequence 2785	AA659719
Sequence 2734	AI276705	Sequence 2786	AA131961
Sequence 2735	AA946883	Sequence 2787	AA315331
Sequence 2736	AA831078	Sequence 2788	AA404615
Sequence 2737	AA378589	Sequence 2789	AI697873
Sequence 2738	AI565591	Sequence 2790	AA578773
Sequence 2739	AA730111	Sequence 2791	AI859442
Sequence 2740	AA355264	Sequence 2792	AA433880
Sequence 2741	AA084987	Sequence 2793	AI025519
Sequence 2742	AA143034	Sequence 2794	AA481979
Sequence 2743	AA188315	Sequence 2795	AA353655
Sequence 2744	T98099	Sequence 2796	AA088344
Sequence 2745	AA102183	Sequence 2797	AA196597
Sequence 2746	AI570128	Sequence 2798	AA760894
Sequence 2747	AA934530	Sequence 2799	AA113333
Sequence 2748	AA206647	Sequence 2800	AA479284
Sequence 2749	AA534235	Sequence 2801	W35301
Sequence 2750	AA113823	Sequence 2802	AA070008
Sequence 2751	AA083345	Sequence 2803	AA833759
Sequence 2752	AA421112	Sequence 2804	AI064763
Sequence 2753	AA493551	Sequence 2805	AA120782
Sequence 2754	AI267652	Sequence 2806	AA129551
Sequence 2755	AI085554	Sequence 2807	AA215777

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Sequence 2808	AA150459	Sequence 2860	AA809784
Sequence 2809	AA436546	Sequence 2861	AA502798
Sequence 2810	AI609659	Sequence 2862	AA568207
Sequence 2811	AA031528	Sequence 2863	AI524414
Sequence 2812	AA446943	Sequence 2864	AI300489
Sequence 2813	AA356069	Sequence 2865	AA129574
Sequence 2814	AI761190	Sequence 2866	AA577672
Sequence 2815	AA040694	Sequence 2867	AI762634
Sequence 2816	AI078802	Sequence 2868	AA071372
Sequence 2817	AI693302	Sequence 2869	AL036902
Sequence 2818	AA513052	Sequence 2870	AI267162
Sequence 2819	AA427459	Sequence 2871	AA463533
Sequence 2820	AA044586	Sequence 2872	N89861
Sequence 2821	AA379449	Sequence 2873	AA206675
Sequence 2822	AI625404	Sequence 2874	AA418477
Sequence 2823	AA333300	Sequence 2875	AA639972
Sequence 2824	AI253300	Sequence 2876	AI620284
Sequence 2825	AI253424	Sequence 2877	AA515908
Sequence 2826	AI374628	Sequence 2878	AA133742
Sequence 2827	AA069845	Sequence 2879	H49828
Sequence 2828	N86927	Sequence 2880	AA911245
Sequence 2829	AA469199	Sequence 2881	AA505816
Sequence 2830	AI267416	Sequence 2882	AA121836
Sequence 2831	AA234135	Sequence 2883	R52729
Sequence 2832	AA286708	Sequence 2884	AA161217
Sequence 2833	AI808505	Sequence 2885	AA731537
Sequence 2834	H78888	Sequence 2886	AI588087
Sequence 2835	T81369	Sequence 2887	AW152265
Sequence 2836	R82456	Sequence 2888	AA017292
Sequence 2837	AA812581	Sequence 2889	N24284
Sequence 2838	AA565214	Sequence 2890	AA088606
Sequence 2839	AA262508	Sequence 2891	T66348
Sequence 2840	AA534644	Sequence 2892	AA492280
Sequence 2841	AA152276	Sequence 2893	AI093823
Sequence 2842	T84605	Sequence 2894	AA836834
Sequence 2843	AA523902	Sequence 2895	AA737421
Sequence 2844	AL037812	Sequence 2896	AA812081
Sequence 2845	AI245297	Sequence 2897	AA960924
Sequence 2846	AI198853	Sequence 2898	W27484
Sequence 2847	AA813266	Sequence 2899	AA362826
Sequence 2848	AI217015	Sequence 2900	AA220921
Sequence 2849	AI557639	Sequence 2901	AI804733
Sequence 2850	AA182513	Sequence 2902	AI754874
Sequence 2851	AA836233	Sequence 2903	AA027126
Sequence 2852	AA557321	Sequence 2904	W63659
Sequence 2853	AI198311	Sequence 2905	AI804327
Sequence 2854	AA903139	Sequence 2906	AA165152
Sequence 2855	AI627818	Sequence 2907	AA112198
Sequence 2856	AA323813	Sequence 2908	AI114489
Sequence 2857	AI469767	Sequence 2909	AW173278
Sequence 2858	R18975	Sequence 2910	AA296298
Sequence 2859	AA196978	Sequence 2911	AI312130

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Sequence 2912	AA369786	Sequence 2964	AA425407
Sequence 2913	AI394364	Sequence 2965	N34141
Sequence 2914	AA206004	Sequence 2966	AI688573
Sequence 2915	AI627750	Sequence 2967	AA227579
Sequence 2916	AI340246	Sequence 2968	AA131834
Sequence 2917	AA084197	Sequence 2969	AA043692
Sequence 2918	AI267492	Sequence 2970	AA575898
Sequence 2919	AI207515	Sequence 2971	AA195259
Sequence 2920	AI356967	Sequence 2972	AA613916
Sequence 2921	W58562	Sequence 2973	AI815495
Sequence 2922	AA151796	Sequence 2974	AA452200
Sequence 2923	W27968	Sequence 2975	AW022756
Sequence 2924	AA312591	Sequence 2976	AA489433
Sequence 2925	AI332698	Sequence 2977	Z46212
Sequence 2926	AA654621	Sequence 2978	T99603
Sequence 2927	AI290658	Sequence 2979	AA513056
Sequence 2928	AI272941	Sequence 2980	R39446
Sequence 2929	AI815498	Sequence 2981	AL037583
Sequence 2930	H57064	Sequence 2982	AI267454
Sequence 2931	AA262537	Sequence 2983	AI307302
Sequence 2932	AI590878	Sequence 2984	AI740900
Sequence 2933	AA229872	Sequence 2985	AA478931
Sequence 2934	AI815196	Sequence 2986	H01539
Sequence 2935	AA541515	Sequence 2987	AI351045
Sequence 2936	AA454921	Sequence 2988	AI478365
Sequence 2937	AA164983	Sequence 2989	AA890010
Sequence 2938	AA034255	Sequence 2990	AA513556
Sequence 2939	AA321703	Sequence 2991	AA429336
Sequence 2940	AA564513	Sequence 2992	AA846576
Sequence 2941	AI889759	Sequence 2993	AA259189
Sequence 2942	AA527116	Sequence 2994	AI948503
Sequence 2943	AA470690	Sequence 2995	AI589075
Sequence 2944	AA349118	Sequence 2996	AA552410
Sequence 2945	AI351780	Sequence 2997	AA923172
Sequence 2946	AA026288	Sequence 2998	AI267461
Sequence 2947	AI031665	Sequence 2999	AA243065
Sequence 2948	R89611	Sequence 3000	AA150001
Sequence 2949	AI914231	Sequence 3001	AI972279
Sequence 2950	AA165165	Sequence 3002	AA383420
Sequence 2951	AL039399	Sequence 3003	AA492192
Sequence 2952	AA187383	Sequence 3004	AA890206
Sequence 2953	AI090786	Sequence 3005	AA477747
Sequence 2954	AI659898	Sequence 3006	AI628389
Sequence 2955	R34894	Sequence 3007	AA053510
Sequence 2956	AI075963	Sequence 3008	AA613587
Sequence 2957	AI557112	Sequence 3009	AA399326
Sequence 2958	AA992606	Sequence 3010	AA280406
Sequence 2959	AF034174	Sequence 3011	AA147341
Sequence 2960	H00112	Sequence 3012	AA314203
Sequence 2961	AA972598	Sequence 3013	AA304947
Sequence 2962	N28331	Sequence 3014	AA449544
Sequence 2963	R46295	Sequence 3015	AA583461

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Sequence 3016	AA247736	Sequence 3068	AA134023
Sequence 3017	N46575	Sequence 3069	AA657830
Sequence 3018	AA022453	Sequence 3070	AA251242
Sequence 3019	AA587806	Sequence 3071	AA131640
Sequence 3020	AA334754	Sequence 3072	AA572895
Sequence 3021	AI590351	Sequence 3073	AI341700
Sequence 3022	AW167665	Sequence 3074	AA092316
Sequence 3023	AA573557	Sequence 3075	AA577598
Sequence 3024	AW005971	Sequence 3076	AA147911
Sequence 3025	AI521156	Sequence 3077	AA292871
Sequence 3026	AA367948	Sequence 3078	AA442145
Sequence 3027	AA399265	Sequence 3079	AA680052
Sequence 3028	AI796507	Sequence 3080	AA039546
Sequence 3029	AA081426	Sequence 3081	AW067912
Sequence 3030	AA420845	Sequence 3082	AI267185
Sequence 3031	AA371205	Sequence 3083	AA148262
Sequence 3032	AA120964	Sequence 3084	AA461222
Sequence 3033	AA627939	Sequence 3085	AW080160
Sequence 3034	AL119562	Sequence 3086	N52554
Sequence 3035	AA349865	Sequence 3087	AA401784
Sequence 3036	AI184994	Sequence 3088	AA447948
Sequence 3037	AA299595	Sequence 3089	AA046763
Sequence 3038	AA640928	Sequence 3090	AI148392
Sequence 3039	AA302480	Sequence 3091	AA195063
Sequence 3040	AA410968	Sequence 3092	AA410580
Sequence 3041	R69818	Sequence 3093	AI127923
Sequence 3042	AA171454	Sequence 3094	AA644237
Sequence 3043	AI815033	Sequence 3095	AA631868
Sequence 3044	AI743852	Sequence 3096	AI910526
Sequence 3045	AI991546	Sequence 3097	AA197003
Sequence 3046	AA099141	Sequence 3098	AW021628
Sequence 3047	W93718	Sequence 3099	AL036483
Sequence 3048	AA253269	Sequence 3100	AI557225
Sequence 3049	AA612666	Sequence 3101	AA420524
Sequence 3050	AA581956	Sequence 3102	AA452120
Sequence 3051	AA045367	Sequence 3103	AA452027
Sequence 3052	AI082864	Sequence 3104	AI962319
Sequence 3053	AA315460	Sequence 3105	AA204703
Sequence 3054	AA430555	Sequence 3106	AA219224
Sequence 3055	AA573187	Sequence 3107	AA035012
Sequence 3056	AL110395	Sequence 3108	AA496801
Sequence 3057	AA806060	Sequence 3109	AA604497
Sequence 3058	AA314188	Sequence 3110	AI267845
Sequence 3059	AA280054	Sequence 3111	AA485767
Sequence 3060	AA252468	Sequence 3112	AA452920
Sequence 3061	AA311466	Sequence 3113	AA470051
Sequence 3062	AA220966	Sequence 3114	R77185
Sequence 3063	AA654650	Sequence 3115	AA150309
Sequence 3064	AA459753	Sequence 3116	R55543
Sequence 3065	AA021037	Sequence 3117	AI366374
Sequence 3066	C15094	Sequence 3118	AA029673
Sequence 3067	AA545727	Sequence 3119	AA826649

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Sequence 3120	AA299140	Sequence 3172	J02642
Sequence 3121	AI198986	Sequence 3173	AB002369
Sequence 3122	N36967	Sequence 3174	AB007972
Sequence 3123	AA400418	Sequence 3175	AF151837
Sequence 3124	AA233409	Sequence 3176	U54558
Sequence 3125	AA069692	Sequence 3177	AB007957
Sequence 3126	AA618601	Sequence 3178	M19961
Sequence 3127	AA043594	Sequence 3179	AF085845
Sequence 3128	AI817249	Sequence 3180	X94910
Sequence 3129	AI065140	Sequence 3181	AJ133005
Sequence 3130	AI061116	Sequence 3182	AL050265
Sequence 3131	AI685124	Sequence 3183	AB018319
Sequence 3132	N36090	Sequence 3184	M86752
Sequence 3133	AA234318	Sequence 3185	X53793
Sequence 3134	AA203492	Sequence 3186	AB022663
Sequence 3135	N73033	Sequence 3187	AF065388
Sequence 3136	AA931164	Sequence 3188	S73498
Sequence 3137	AI694767	Sequence 3189	AL050091
Sequence 3138	AA280221	Sequence 3190	U40282
Sequence 3139	AA325077	Sequence 3191	X78136
Sequence 3140	AA316159	Sequence 3192	M16660
Sequence 3141	AA017189	Sequence 3193	AF016509
Sequence 3142	AA782483	Sequence 3194	AF151840
Sequence 3143	AI216138	Sequence 3195	AF070618
Sequence 3144	AA683136	Sequence 3196	AF057160
Sequence 3145	AA366415	Sequence 3197	X69086
Sequence 3146	AA131327	Sequence 3198	X81836
Sequence 3147	AA348734	Sequence 3199	U09820
Sequence 3148	AL045447	Sequence 3200	AF068302
Sequence 3149	AL049935	Sequence 3201	AB006965
Sequence 3150	AF073298	Sequence 3202	AF046001
Sequence 3151	S39329	Sequence 3203	U07991
Sequence 3152	Y12860	Sequence 3204	AB011145
Sequence 3153	AF103720	Sequence 3205	AF144755
Sequence 3154	AF071202	Sequence 3206	M55543
Sequence 3155	AF026166	Sequence 3207	AB033017
Sequence 3156	M36634	Sequence 3208	AF052097
Sequence 3157	AF058953	Sequence 3209	Y11435
Sequence 3158	AF070525	Sequence 3210	AJ131753
Sequence 3159	AB014601	Sequence 3211	X66276
Sequence 3160	AF019214	Sequence 3212	AB014563
Sequence 3161	AF176574	Sequence 3213	AF093097
Sequence 3162	M63180	Sequence 3214	AJ012499
Sequence 3163	AB000468	Sequence 3215	AF007151
Sequence 3164	M16768	Sequence 3216	M93651
Sequence 3165	AB007956	Sequence 3217	AB018358
Sequence 3166	X73608	Sequence 3218	Y00345
Sequence 3167	M17323	Sequence 3219	AF109219
Sequence 3168	AL117644	Sequence 3220	U12465
Sequence 3169	D10495	Sequence 3221	L09235
Sequence 3170	M21895	Sequence 3222	AB005289
Sequence 3171	M83822	Sequence 3223	D21260

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Sequence 3224	L05425	Sequence 3276	AF070553
Sequence 3225	X68560	Sequence 3277	AF032885
Sequence 3226	M73547	Sequence 3278	J04611
Sequence 3227	D63486	Sequence 3279	S75755
Sequence 3228	J04205	Sequence 3280	D84476
Sequence 3229	X80910	Sequence 3281	J04443
Sequence 3230	X05908	Sequence 3282	AL050192
Sequence 3231	E02822	Sequence 3283	AF131856
Sequence 3232	AF054175	Sequence 3284	AB014531
Sequence 3233	AF016369	Sequence 3285	AB019524
Sequence 3234	X56351	Sequence 3286	M64571
Sequence 3235	AF103907	Sequence 3287	X60111
Sequence 3236	D28480	Sequence 3288	AL110214
Sequence 3237	AF034607	Sequence 3289	D43947
Sequence 3238	AJ010842	Sequence 3290	AF000983
Sequence 3239	AB011159	Sequence 3291	AF124438
Sequence 3240	AB006621	Sequence 3292	AB007510
Sequence 3241	U09813	Sequence 3293	AF000994
Sequence 3242	AB001636	Sequence 3294	AJ004913
Sequence 3243	AF149045	Sequence 3295	AF055470
Sequence 3244	AF055994	Sequence 3296	AJ005016
Sequence 3245	M26663	Sequence 3297	X57398
Sequence 3246	AB032983	Sequence 3298	M20681
Sequence 3247	U80456	Sequence 3299	U15008
Sequence 3248	AF087438	Sequence 3300	S70290
Sequence 3249	AB029027	Sequence 3301	AB032991
Sequence 3250	AF096773	Sequence 3302	AF097514
Sequence 3251	U12596	Sequence 3303	S78203
Sequence 3252	D80009	Sequence 3304	AF010233
Sequence 3253	AF078863	Sequence 3305	AF070660
Sequence 3254	M77804	Sequence 3306	AF000982
Sequence 3255	M24902	Sequence 3307	U79716
Sequence 3256	M22590	Sequence 3308	Z22548
Sequence 3257	AF077200	Sequence 3309	AF084260
Sequence 3258	AF125100	Sequence 3310	AF151859
Sequence 3259	AF041259	Sequence 3311	AL050373
Sequence 3260	L27841	Sequence 3312	Z26317
Sequence 3261	AF032922	Sequence 3313	U46689
Sequence 3262	U41806	Sequence 3314	M94556
Sequence 3263	AL049219	Sequence 3315	S67859
Sequence 3264	AB002451	Sequence 3316	AB023153
Sequence 3265	D14696	Sequence 3317	AF021351
Sequence 3266	X06537	Sequence 3318	E02628
Sequence 3267	E05692	Sequence 3319	AL110179
Sequence 3268	M29366	Sequence 3320	AB028945
Sequence 3269	AB007947	Sequence 3321	AF054179
Sequence 3270	X97065	Sequence 3322	U09848
Sequence 3271	U37518	Sequence 3323	U43899
Sequence 3272	AB032959	Sequence 3324	AJ249248
Sequence 3273	X70326	Sequence 3325	L25899
Sequence 3274	AB033051	Sequence 3326	U13616
Sequence 3275	M10905	Sequence 3327	AB032948



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Sequence 3328	L15702	Sequence 3380	E03569
Sequence 3329	AF017748	Sequence 3381	D28476
Sequence 3330	U14528	Sequence 3382	AF091263
Sequence 3331	AF098533	Sequence 3383	AB032981
Sequence 3332	L07033	Sequence 3384	AF070600
Sequence 3333	M14648	Sequence 3385	M55409
Sequence 3334	X56932	Sequence 3386	AF152306
Sequence 3335	AB001106	Sequence 3387	M60255
Sequence 3336	J05533	Sequence 3388	AF134159
Sequence 3337	AF114817	Sequence 3389	AF188746
Sequence 3338	AF150105	Sequence 3390	AF100742
Sequence 3339	D13315	Sequence 3391	AB032954
Sequence 3340	AL049276	Sequence 3392	AF020736
Sequence 3341	AF153608	Sequence 3393	J03537
Sequence 3342	D13629	Sequence 3394	S67815
Sequence 3343	AF188745	Sequence 3395	AF077202
Sequence 3344	AF198358	Sequence 3396	AL049969
Sequence 3345	D38305	Sequence 3397	AL049294
Sequence 3346	AF007791	Sequence 3398	X53961
Sequence 3347	AF100756	Sequence 3399	L34840
Sequence 3348	AB008430	Sequence 3400	AF073887
Sequence 3349	D87666	Sequence 3401	X16940
Sequence 3350	L12168	Sequence 3402	AF086236
Sequence 3351	E08764	Sequence 3403	U37143
Sequence 3352	M69106	Sequence 3404	U70063
Sequence 3353	AF012281	Sequence 3405	X56958
Sequence 3354	E00195	Sequence 3406	M23161
Sequence 3355	L15203	Sequence 3407	J04208
Sequence 3356	U39318	Sequence 3408	X74070
Sequence 3357	AB033078	Sequence 3409	D50927
Sequence 3358	M64241	Sequence 3410	D13866
Sequence 3359	AF147331	Sequence 3411	L38951
Sequence 3360	AF070561	Sequence 3412	AF191018
Sequence 3361	Z11338	Sequence 3413	D78611
Sequence 3362	M69066	Sequence 3414	AB021288
Sequence 3363	AF057299	Sequence 3415	M97347
Sequence 3364	D38555	Sequence 3416	J05211
Sequence 3365	AL050198	Sequence 3417	AF131844
Sequence 3366	X17620	Sequence 3418	AJ010953
Sequence 3367	S72481	Sequence 3419	U81006
Sequence 3368	AF013759	Sequence 3420	E01979
Sequence 3369	L11005	Sequence 3421	AF067170
Sequence 3370	D21262	Sequence 3422	AF022229
Sequence 3371	AF054838	Sequence 3423	AF108092
Sequence 3372	AB001872	Sequence 3424	AF067972
Sequence 3373	M22918	Sequence 3425	AF098865
Sequence 3374	AF064484	Sequence 3426	U07919
Sequence 3375	M16247	Sequence 3427	D14710
Sequence 3376	D50406	Sequence 3428	X74801
Sequence 3377	AF068754	Sequence 3429	U02882
Sequence 3378	J02853	Sequence 3430	S77601
Sequence 3379	AF061258	Sequence 3431	AL122076

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Sequence 3432	D50926	Sequence 3484	U53468
Sequence 3433	AF151836	Sequence 3485	M28372
Sequence 3434	U51990	Sequence 3486	AF058718
Sequence 3435	M17325	Sequence 3487	J03007
Sequence 3436	D50420	Sequence 3488	AL117430
Sequence 3437	AF092134	Sequence 3489	AL080097
Sequence 3438	X12451	Sequence 3490	D63480
Sequence 3439	M22414	Sequence 3491	U61397
Sequence 3440	AL050186	Sequence 3492	AF035319
Sequence 3441	U25276	Sequence 3493	AL110183
Sequence 3442	AF070652	Sequence 3494	AF104914
Sequence 3443	S82081	Sequence 3495	AL050100
Sequence 3444	L08599	Sequence 3496	AB002382
Sequence 3445	AB028981	Sequence 3497	U12778
Sequence 3446	D49396	Sequence 3498	D14665
Sequence 3447	AF147339	Sequence 3499	Y13323
Sequence 3448	U68140	Sequence 3500	AF099989
Sequence 3449	AL110159	Sequence 3501	D14662
Sequence 3450	AF052180	Sequence 3502	AF023244
Sequence 3451	AF020038	Sequence 3503	AL117666
Sequence 3452	AF089747	Sequence 3504	AB016068
Sequence 3453	AB018280	Sequence 3505	D00422
Sequence 3454	U92544	Sequence 3506	AB014547
Sequence 3455	M35252	Sequence 3507	J02923
Sequence 3456	D86985	Sequence 3508	AF078861
Sequence 3457	AF057706	Sequence 3509	L37080
Sequence 3458	AL079298	Sequence 3510	X55654
Sequence 3459	U51903	Sequence 3511	AF077034
Sequence 3460	AF188747	Sequence 3512	U43604
Sequence 3461	AL117621	Sequence 3513	M27689
Sequence 3462	D10040	Sequence 3514	AF047020
Sequence 3463	AF135488	Sequence 3515	AF095770
Sequence 3464	Z34975	Sequence 3516	AL109728
Sequence 3465	U15552	Sequence 3517	AL049470
Sequence 3466	AF159056	Sequence 3518	M73837
Sequence 3467	U80735	Sequence 3519	X91257
Sequence 3468	D23662	Sequence 3520	AF081259
Sequence 3469	X16896	Sequence 3521	AF037447
Sequence 3470	M90360	Sequence 3522	M69181
Sequence 3471	U90919	Sequence 3523	M34840
Sequence 3472	AL050051	Sequence 3524	D30037
Sequence 3473	AF000364	Sequence 3525	X82125
Sequence 3474	AF005043	Sequence 3526	AJ010046
Sequence 3475	U15009	Sequence 3527	AF102846
Sequence 3476	AF132000	Sequence 3528	AL050187
Sequence 3477	AB007885	Sequence 3529	AF132945
Sequence 3478	U49957	Sequence 3530	X92972
Sequence 3479	M65217	Sequence 3531	M22976
Sequence 3480	AB007883	Sequence 3532	D87742
Sequence 3481	U24105	Sequence 3533	AF104012
Sequence 3482	M22382	Sequence 3534	D49489
Sequence 3483	D42044	Sequence 3535	U57847

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Sequence 3536	AL035304	Sequence 3588	AF100755
Sequence 3537	AF039918	Sequence 3589	D42045
Sequence 3538	AB033079	Sequence 3590	D87442
Sequence 3539	M74509	Sequence 3591	AB033007
Sequence 3540	AL121735	Sequence 3592	X15187
Sequence 3541	AF171944	Sequence 3593	D28540
Sequence 3542	AB011004	Sequence 3594	Y15906
Sequence 3543	AF155235	Sequence 3595	Y07593
Sequence 3544	AB014888	Sequence 3596	U47674
Sequence 3545	M22920	Sequence 3597	X75861
Sequence 3546	D21092	Sequence 3598	D45198
Sequence 3547	AF004162	Sequence 3599	U90551
Sequence 3548	U00238	Sequence 3600	AF151793
Sequence 3549	U50939	Sequence 3601	L12686
Sequence 3550	M24194	Sequence 3602	AF007216
Sequence 3551	AF035293	Sequence 3603	AF086179
Sequence 3552	AF151103	Sequence 3604	AB000888
Sequence 3553	X80695	Sequence 3605	AF013758
Sequence 3554	AL133076	Sequence 3606	L19185
Sequence 3555	AF069601	Sequence 3607	AF131784
Sequence 3556	AF082657	Sequence 3608	M11353
Sequence 3557	AB019568	Sequence 3609	AF100744
Sequence 3558	AL110181	Sequence 3610	AJ010069
Sequence 3559	D31886	Sequence 3611	D14705
Sequence 3560	AF084457	Sequence 3612	AF047442
Sequence 3561	Y00281	Sequence 3613	Y09188
Sequence 3562	U02493	Sequence 3614	AF006086
Sequence 3563	X75535	Sequence 3615	D14043
Sequence 3564	AB002330	Sequence 3616	AL110180
Sequence 3565	L19779	Sequence 3617	M16804
Sequence 3566	AF156965	Sequence 3618	X60489
Sequence 3567	AF151868	Sequence 3619	AB020658
Sequence 3568	AF075061	Sequence 3620	X15729
Sequence 3569	AL050089	Sequence 3621	U83857
Sequence 3570	X76732	Sequence 3622	AB018331
Sequence 3571	X05332	Sequence 3623	D10924
Sequence 3572	AF010312	Sequence 3624	AB000095
Sequence 3573	AL050073	Sequence 3625	D29011
Sequence 3574	M76766	Sequence 3626	J04183
Sequence 3575	AJ002744	Sequence 3627	AF068180
Sequence 3576	D13641	Sequence 3628	AF078855
Sequence 3577	AF060219	Sequence 3629	J05594
Sequence 3578	AB014597	Sequence 3630	AF078860
Sequence 3579	E01574	Sequence 3631	L38486
Sequence 3580	X74331	Sequence 3632	AF053970
Sequence 3581	AL049932	Sequence 3633	AF086449
Sequence 3582	D16562	Sequence 3634	M18366
Sequence 3583	AF078848	Sequence 3635	AF107405
Sequence 3584	AJ223812	Sequence 3636	D80001
Sequence 3585	AL117392	Sequence 3637	M31627
Sequence 3586	L08437	Sequence 3638	AF000652
Sequence 3587	AB023173	Sequence 3639	M69238

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Sequence 3640	AF070649	Sequence 3692	X41346
Sequence 3641	E05957	Sequence 3693	Z15583
Sequence 3642	AL050272	Sequence 3694	V58360
Sequence 3643	M64572	Sequence 3695	V90283
Sequence 3644	U36336	Sequence 3696	Q69214
Sequence 3645	X94323	Sequence 3697	V58756
Sequence 3646	L13385	Sequence 3698	X76578
Sequence 3647	AB023196	Sequence 3699	V58510
Sequence 3648	AF000231	Sequence 3700	V34176
Sequence 3649	U21858	Sequence 3701	Z08806
Sequence 3650	K01911	Sequence 3702	V58544
Sequence 3651	U58855	Sequence 3703	V29267
Sequence 3652	S74678	Sequence 3704	T59274
Sequence 3653	M10036	Sequence 3705	X27262
Sequence 3654	AF131814	Sequence 3706	X40518
Sequence 3655	D87444	Sequence 3707	V62428
Sequence 3656	AB028948	Sequence 3708	V99733
Sequence 3657	AF022212	Sequence 3709	T72167
Sequence 3658	D50405	Sequence 3710	V58628
Sequence 3659	AF033026	Sequence 3711	X03841
Sequence 3660	J03015	Sequence 3712	V70354
Sequence 3661	AB023179	Sequence 3713	V58523
Sequence 3662	AF022108	Sequence 3714	Z27248
Sequence 3663	AF038404	Sequence 3715	X26850
Sequence 3664	AF086472	Sequence 3716	X26844
Sequence 3665	AB012910	Sequence 3717	V36503
Sequence 3666	D28473	Sequence 3718	V59613
Sequence 3667	X64838	Sequence 3719	Z33428
Sequence 3668	D29954	Sequence 3720	V57903
Sequence 3669	J04615	Sequence 3721	Z15132
Sequence 3670	AL049974	Sequence 3722	V84510
Sequence 3671	AL133108	Sequence 3723	AC02230
Sequence 3672	AL050201	Sequence 3724	AC33541
Sequence 3673	AB033091	Sequence 3725	AC34175
Sequence 3674	D38522	Sequence 3726	AC34877
Sequence 3675	U17714	Sequence 3727	AC36715
Sequence 3676	AB018284	Sequence 3728	AC36117
Sequence 3677	D14812	Sequence 3729	AC36739
Sequence 3678	M34181	Sequence 3730	AC36708
Sequence 3679	Z13009	Sequence 3731	AC36079
Sequence 3680	L13773	Sequence 3732	AC36078
Sequence 3681	AF027824	Sequence 3733	AC36740
Sequence 3682	X82321	Sequence 3734	A21185
Sequence 3683	AB020694	Sequence 3735	AB000220
Sequence 3684	S69272	Sequence 3736	AB002303
Sequence 3685	AF070597	Sequence 3737	AB002369
Sequence 3686	AF091090	Sequence 3738	AB002387
Sequence 3687	U90548	Sequence 3739	AB007510
Sequence 3688	V62427	Sequence 3740	AB007884
Sequence 3689	V62430	Sequence 3741	AB007956
Sequence 3690	V35457	Sequence 3742	AB011004
Sequence 3691	V72211	Sequence 3743	AB014531

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Sequence 3744	AB014597	Sequence 3796	AF151103
Sequence 3745	AB016068	Sequence 3797	AF152306
Sequence 3746	AB018080	Sequence 3798	AF156965
Sequence 3747	AB018284	Sequence 3799	AF159056
Sequence 3748	AB023230	Sequence 3800	AF170583
Sequence 3749	AB032957	Sequence 3801	AF176574
Sequence 3750	AB032983	Sequence 3802	AF188745
Sequence 3751	AB033007	Sequence 3803	AJ001443
Sequence 3752	AB033078	Sequence 3804	AJ002744
Sequence 3753	AB033079	Sequence 3805	AJ004913
Sequence 3754	AB033091	Sequence 3806	AJ010069
Sequence 3755	AF000231	Sequence 3807	AJ223812
Sequence 3756	AF001212	Sequence 3808	AJ224875
Sequence 3757	AF007144	Sequence 3809	AL035304
Sequence 3758	AF007216	Sequence 3810	AL049229
Sequence 3759	AF007217	Sequence 3811	AL049274
Sequence 3760	AF010233	Sequence 3812	AL049932
Sequence 3761	AF010312	Sequence 3813	AL049941
Sequence 3762	AF012126	Sequence 3814	AL049969
Sequence 3763	AF012549	Sequence 3815	AL050073
Sequence 3764	AF014955	Sequence 3816	AL080084
Sequence 3765	AF020202	Sequence 3817	AL110126
Sequence 3766	AF020736	Sequence 3818	AL117392
Sequence 3767	AF020761	Sequence 3819	AL117423
Sequence 3768	AF026166	Sequence 3820	AL117576
Sequence 3769	AF028832	Sequence 3821	AL117644
Sequence 3770	AF030403	Sequence 3822	AL117665
Sequence 3771	AF038404	Sequence 3823	D00039
Sequence 3772	AF039918	Sequence 3824	D13641
Sequence 3773	AF044956	Sequence 3825	D13866
Sequence 3774	AF047020	Sequence 3826	D14043
Sequence 3775	AF054838	Sequence 3827	D16562
Sequence 3776	AF060219	Sequence 3828	D29954
Sequence 3777	AF061258	Sequence 3829	D38305
Sequence 3778	AF065388	Sequence 3830	D80005
Sequence 3779	AF070553	Sequence 3831	D87742
Sequence 3780	AF071202	Sequence 3832	D88208
Sequence 3781	AF077037	Sequence 3833	D90226
Sequence 3782	AF077042	Sequence 3834	E01956
Sequence 3783	AF078849	Sequence 3835	E02628
Sequence 3784	AF081281	Sequence 3836	E03569
Sequence 3785	AF084555	Sequence 3837	E07798
Sequence 3786	AF085845	Sequence 3838	J02923
Sequence 3787	AF086477	Sequence 3839	J04205
Sequence 3788	AF092133	Sequence 3840	J04794
Sequence 3789	AF092565	Sequence 3841	J05192
Sequence 3790	AF103907	Sequence 3842	K01911
Sequence 3791	AF132937	Sequence 3843	L07033
Sequence 3792	AF134159	Sequence 3844	L38961
Sequence 3793	AF144566	Sequence 3845	M10036
Sequence 3794	AF146277	Sequence 3846	M12938
Sequence 3795	AF147339	Sequence 3847	M17885

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Sequence 3848	M20260	Sequence 3900	AA111855
Sequence 3849	M21895	Sequence 3901	AA113811
Sequence 3850	M24194	Sequence 3902	AA126472
Sequence 3851	M24902	Sequence 3903	AA135001
Sequence 3852	M26663	Sequence 3904	AA136221
Sequence 3853	M29366	Sequence 3905	AA136404
Sequence 3854	M30938	Sequence 3906	AA148087
Sequence 3855	M34840	Sequence 3907	AA148831
Sequence 3856	M36634	Sequence 3908	AA149579
Sequence 3857	M97934	Sequence 3909	AA149979
Sequence 3858	S82081	Sequence 3910	AA160149
Sequence 3859	U01923	Sequence 3911	AA167696
Sequence 3860	U02680	Sequence 3912	AA167829
Sequence 3861	U17104	Sequence 3913	AA171605
Sequence 3862	U33821	Sequence 3914	AA180845
Sequence 3863	U34252	Sequence 3915	AA187604
Sequence 3864	U36336	Sequence 3916	AA191536
Sequence 3865	U50203	Sequence 3917	AA193086
Sequence 3866	U51990	Sequence 3918	AA195010
Sequence 3867	X04408	Sequence 3919	AA196978
Sequence 3868	X05332	Sequence 3920	AA203537
Sequence 3869	X15729	Sequence 3921	AA215793
Sequence 3870	X55654	Sequence 3922	AA216690
Sequence 3871	X67698	Sequence 3923	AA225294
Sequence 3872	X74331	Sequence 3924	AA226171
Sequence 3873	X75535	Sequence 3925	AA227000
Sequence 3874	X75861	Sequence 3926	AA228273
Sequence 3875	X80910	Sequence 3927	AA228940
Sequence 3876	X87241	Sequence 3928	AA229495
Sequence 3877	X94323	Sequence 3929	AA243809
Sequence 3878	X94910	Sequence 3930	AA250947
Sequence 3879	X98296	Sequence 3931	AA256117
Sequence 3880	Y00345	Sequence 3932	AA257955
Sequence 3881	Z11531	Sequence 3933	AA261819
Sequence 3882	Z26317	Sequence 3934	AA280647
Sequence 3883	Z46606	Sequence 3935	AA282286
Sequence 3884	Z48605	Sequence 3936	AA285341
Sequence 3885	AA001734	Sequence 3937	AA297647
Sequence 3886	AA002140	Sequence 3938	AA306876
Sequence 3887	AA026797	Sequence 3939	AA307103
Sequence 3888	AA041467	Sequence 3940	AA308578
Sequence 3889	AA043109	Sequence 3941	AA310637
Sequence 3890	AA045803	Sequence 3942	AA311819
Sequence 3891	AA047482	Sequence 3943	AA312495
Sequence 3892	AA056437	Sequence 3944	AA312968
Sequence 3893	AA058899	Sequence 3945	AA314907
Sequence 3894	AA081003	Sequence 3946	AA315555
Sequence 3895	AA083026	Sequence 3947	AA316159
Sequence 3896	AA085835	Sequence 3948	AA326359
Sequence 3897	AA091277	Sequence 3949	AA326833
Sequence 3898	AA094000	Sequence 3950	AA334710
Sequence 3899	AA095049	Sequence 3951	AA336412

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Sequence 3952	AA345904	Sequence 4004	AA639786
Sequence 3953	AA346844	Sequence 4005	AA640474
Sequence 3954	AA355553	Sequence 4006	AA652478
Sequence 3955	AA359832	Sequence 4007	AA662733
Sequence 3956	AA368792	Sequence 4008	AA680052
Sequence 3957	AA375531	Sequence 4009	AA701667
Sequence 3958	AA399218	Sequence 4010	AA706224
Sequence 3959	AA399606	Sequence 4011	AA748031
Sequence 3960	AA418628	Sequence 4012	AA770006
Sequence 3961	AA418770	Sequence 4013	AA779670
Sequence 3962	AA420680	Sequence 4014	AA810905
Sequence 3963	AA424456	Sequence 4015	AA813941
Sequence 3964	AA426351	Sequence 4016	AA860839
Sequence 3965	AA430304	Sequence 4017	AA890010
Sequence 3966	AA436125	Sequence 4018	AA890326
Sequence 3967	AA437099	Sequence 4019	AA902625
Sequence 3968	AA437224	Sequence 4020	AA971532
Sequence 3969	AA442479	Sequence 4021	AA975275
Sequence 3970	AA447322	Sequence 4022	AA984384
Sequence 3971	AA455917	Sequence 4023	AA988520
Sequence 3972	AA460587	Sequence 4024	AA992583
Sequence 3973	AA460649	Sequence 4025	AF114027
Sequence 3974	AA461015	Sequence 4026	AF150208
Sequence 3975	AA464133	Sequence 4027	AI041116
Sequence 3976	AA469238	Sequence 4028	AI051210
Sequence 3977	AA471025	Sequence 4029	AI064967
Sequence 3978	AA480124	Sequence 4030	AI075338
Sequence 3979	AA488732	Sequence 4031	AI076042
Sequence 3980	AA489173	Sequence 4032	AI080267
Sequence 3981	AA492192	Sequence 4033	AI129991
Sequence 3982	AA497050	Sequence 4034	AI133562
Sequence 3983	AA501968	Sequence 4035	AI147472
Sequence 3984	AA502799	Sequence 4036	AI149363
Sequence 3985	AA502979	Sequence 4037	AI188850
Sequence 3986	AA516531	Sequence 4038	AI198311
Sequence 3987	AA523498	Sequence 4039	AI198937
Sequence 3988	AA523902	Sequence 4040	AI199681
Sequence 3989	AA524651	Sequence 4041	AI201248
Sequence 3990	AA528104	Sequence 4042	AI221390
Sequence 3991	AA531249	Sequence 4043	AI263876
Sequence 3992	AA533553	Sequence 4044	AI267162
Sequence 3993	AA541703	Sequence 4045	AI267185
Sequence 3994	AA543102	Sequence 4046	AI267216
Sequence 3995	AA548472	Sequence 4047	AI267254
Sequence 3996	AA548722	Sequence 4048	AI267282
Sequence 3997	AA569813	Sequence 4049	AI278643
Sequence 3998	AA570171	Sequence 4050	AI300562
Sequence 3999	AA576425	Sequence 4051	AI336326
Sequence 4000	AA578773	Sequence 4052	AI361256
Sequence 4001	AA580771	Sequence 4053	AI367759
Sequence 4002	AA608967	Sequence 4054	AI431801
Sequence 4003	AA635590	Sequence 4055	AI472067

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Sequence 4056	AI547327	Sequence 4108	H54240
Sequence 4057	AI557182	Sequence 4109	H78517
Sequence 4058	AI557225	Sequence 4110	H78888
Sequence 4059	AI557235	Sequence 4111	H79639
Sequence 4060	AI557277	Sequence 4112	N23545
Sequence 4061	AI564487	Sequence 4113	N27218
Sequence 4062	AI620427	Sequence 4114	N58818
Sequence 4063	AI627356	Sequence 4115	N62448
Sequence 4064	AI630306	Sequence 4116	R35529
Sequence 4065	AI630357	Sequence 4117	R55535
Sequence 4066	AI630362	Sequence 4118	R72738
Sequence 4067	AI633646	Sequence 4119	T08676
Sequence 4068	AI656122	Sequence 4120	T79397
Sequence 4069	AI658850	Sequence 4121	T79514
Sequence 4070	AI682937	Sequence 4122	W15195
Sequence 4071	AI686139	Sequence 4123	W19757
Sequence 4072	AI694767	Sequence 4124	W25081
Sequence 4073	AI741213	Sequence 4125	W56069
Sequence 4074	AI743852	Sequence 4126	W67735
Sequence 4075	AI755085	Sequence 4127	W79779
Sequence 4076	AI766083	Sequence 4128	W88856
Sequence 4077	AI767692	Sequence 4129	T99948
Sequence 4078	AI799891	Sequence 4130	V54589
Sequence 4079	AI825408	Sequence 4131	V58628
Sequence 4080	AI826504	Sequence 4132	V63195
Sequence 4081	AI912057	Sequence 4133	X03841
Sequence 4082	AI914133	Sequence 4134	X04318
Sequence 4083	AI925735	Sequence 4135	X26850
Sequence 4084	AI949242	Sequence 4136	X27262
Sequence 4085	AI953152	Sequence 4137	X27278
Sequence 4086	AI968401	Sequence 4138	X39870
Sequence 4087	AI970381	Sequence 4139	X97676
Sequence 4088	AL036483	Sequence 4140	Z15277
Sequence 4089	AL042404	Sequence 4141	Z27248
Sequence 4090	AL043046	Sequence 4142	Z33526
Sequence 4091	AL047415	Sequence 4143	Z41241
Sequence 4092	AL047881	Sequence 4144	AC34465
Sequence 4093	AW022756	Sequence 4145	AC36078
Sequence 4094	AW044142	Sequence 4146	AC36079
Sequence 4095	AW068579	Sequence 4147	AC36099
Sequence 4096	AW149817	Sequence 4148	AC36175
Sequence 4097	AW160731	Sequence 4149	AC36180
Sequence 4098	AW163485	Sequence 4150	AC36201
Sequence 4099	AW176022	Sequence 4151	AC36457
Sequence 4100	AW179322	Sequence 4152	AC36740
Sequence 4101	C06419	Sequence 4153	AB020866
Sequence 4102	H00112	Sequence 4154	AC002040
Sequence 4103	H03785	Sequence 4155	AC002064
Sequence 4104	H06944	Sequence 4156	AC003991
Sequence 4105	H13891	Sequence 4157	AC004656
Sequence 4106	H15654	Sequence 4158	AC005154
Sequence 4107	H17741	Sequence 4159	AC005538



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Sequence 4160	AC005831	Sequence 4212	AA057490
Sequence 4161	AC007052	Sequence 4213	AA057861
Sequence 4162	AC007686	Sequence 4214	AA062731
Sequence 4163	AF061258	Sequence 4215	AA062859
Sequence 4164	AL034399	Sequence 4216	AA070349
Sequence 4165	AL035666	Sequence 4217	AA074142
Sequence 4166	AL049821	Sequence 4218	AA074729
Sequence 4167	AP000527	Sequence 4219	AA074869
Sequence 4168	AP000528	Sequence 4220	AA075133
Sequence 4169	AP000529	Sequence 4221	AA075459
Sequence 4170	G16768	Sequence 4222	AA081007
Sequence 4171	S65371	Sequence 4223	AA081355
Sequence 4172	U66083	Sequence 4224	AA082685
Sequence 4173	X70394	Sequence 4225	AA083479
Sequence 4174	Z94388	Sequence 4226	AA084987
Sequence 4175	AW235635	Sequence 4227	AA085483
Sequence 4176	AI383637	Sequence 4228	AA088372
Sequence 4177	AC005480	Sequence 4229	AA088770
Sequence 4178	AL031003	Sequence 4230	AA090106
Sequence 4179	AB020866	Sequence 4231	AA093276
Sequence 4180	S65371	Sequence 4232	AA094656
Sequence 4181	AA001673	Sequence 4233	AA096121
Sequence 4182	AA002131	Sequence 4234	AA099976
Sequence 4183	AA007370	Sequence 4235	AA100852
Sequence 4184	AA009611	Sequence 4236	AA100876
Sequence 4185	AA010689	Sequence 4237	AA112310
Sequence 4186	AA010981	Sequence 4238	AA114062
Sequence 4187	AA021608	Sequence 4239	AA114854
Sequence 4188	AA024581	Sequence 4240	AA114967
Sequence 4189	AA026399	Sequence 4241	AA115021
Sequence 4190	AA029143	Sequence 4242	AA115492
Sequence 4191	AA029567	Sequence 4243	AA120816
Sequence 4192	AA029889	Sequence 4244	AA121127
Sequence 4193	AA031360	Sequence 4245	AA121419
Sequence 4194	AA032221	Sequence 4246	AA122237
Sequence 4195	AA035001	Sequence 4247	AA122245
Sequence 4196	AA035773	Sequence 4248	AA125817
Sequence 4197	AA037425	Sequence 4249	AA126121
Sequence 4198	AA037620	Sequence 4250	AA126729
Sequence 4199	AA039807	Sequence 4251	AA126809
Sequence 4200	AA039998	Sequence 4252	AA126921
Sequence 4201	AA040180	Sequence 4253	AA127029
Sequence 4202	AA040710	Sequence 4254	AA127714
Sequence 4203	AA044118	Sequence 4255	AA128387
Sequence 4204	AA044586	Sequence 4256	AA128442
Sequence 4205	AA046083	Sequence 4257	AA129615
Sequence 4206	AA047432	Sequence 4258	AA129652
Sequence 4207	AA053265	Sequence 4259	AA129781
Sequence 4208	AA053932	Sequence 4260	AA130162
Sequence 4209	AA056345	Sequence 4261	AA130515
Sequence 4210	AA057063	Sequence 4262	AA130529
Sequence 4211	AA057270	Sequence 4263	AA130928

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Sequence 4264	AA131313	Sequence 4316	AA191134
Sequence 4265	AA131812	Sequence 4317	AA191552
Sequence 4266	AA131926	Sequence 4318	AA193346
Sequence 4267	AA132689	Sequence 4319	AA194517
Sequence 4268	AA132844	Sequence 4320	AA194860
Sequence 4269	AA133030	Sequence 4321	AA195010
Sequence 4270	AA133361	Sequence 4322	AA195044
Sequence 4271	AA133652	Sequence 4323	AA195063
Sequence 4272	AA134022	Sequence 4324	AA195145
Sequence 4273	AA134203	Sequence 4325	AA196558
Sequence 4274	AA135870	Sequence 4326	AA199802
Sequence 4275	AA136215	Sequence 4327	AA203592
Sequence 4276	AA137165	Sequence 4328	AA204701
Sequence 4277	AA143252	Sequence 4329	AA204781
Sequence 4278	AA143578	Sequence 4330	AA205647
Sequence 4279	AA146582	Sequence 4331	AA205870
Sequence 4280	AA147608	Sequence 4332	AA213619
Sequence 4281	AA147980	Sequence 4333	AA214710
Sequence 4282	AA148729	Sequence 4334	AA215628
Sequence 4283	AA149337	Sequence 4335	AA218936
Sequence 4284	AA149492	Sequence 4336	AA219705
Sequence 4285	AA149979	Sequence 4337	AA223306
Sequence 4286	AA150891	Sequence 4338	AA224124
Sequence 4287	AA151018	Sequence 4339	AA225865
Sequence 4288	AA151506	Sequence 4340	AA226137
Sequence 4289	AA156092	Sequence 4341	AA226171
Sequence 4290	AA156879	Sequence 4342	AA227506
Sequence 4291	AA158507	Sequence 4343	AA227846
Sequence 4292	AA159181	Sequence 4344	AA228273
Sequence 4293	AA159272	Sequence 4345	AA229183
Sequence 4294	AA165164	Sequence 4346	AA229495
Sequence 4295	AA167011	Sequence 4347	AA229513
Sequence 4296	AA167150	Sequence 4348	AA229993
Sequence 4297	AA167674	Sequence 4349	AA232691
Sequence 4298	AA169374	Sequence 4350	AA233689
Sequence 4299	AA169794	Sequence 4351	AA233868
Sequence 4300	AA171510	Sequence 4352	AA234130
Sequence 4301	AA171872	Sequence 4353	AA236057
Sequence 4302	AA171883	Sequence 4354	AA236323
Sequence 4303	AA173363	Sequence 4355	AA243361
Sequence 4304	AA173997	Sequence 4356	AA247816
Sequence 4305	AA176331	Sequence 4357	AA251303
Sequence 4306	AA177127	Sequence 4358	AA251644
Sequence 4307	AA180137	Sequence 4359	AA252355
Sequence 4308	AA186346	Sequence 4360	AA255695
Sequence 4309	AA186399	Sequence 4361	AA255717
Sequence 4310	AA186733	Sequence 4362	AA256330
Sequence 4311	AA187383	Sequence 4363	AA256757
Sequence 4312	AA188045	Sequence 4364	AA262296
Sequence 4313	AA188052	Sequence 4365	AA279347
Sequence 4314	AA188169	Sequence 4366	AA279949
Sequence 4315	AA190561	Sequence 4367	AA280694

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Sequence 4368	AA280735	Sequence 4420	AA344743
Sequence 4369	AA283704	Sequence 4421	AA345624
Sequence 4370	AA284161	Sequence 4422	AA349118
Sequence 4371	AA284494	Sequence 4423	AA352131
Sequence 4372	AA284555	Sequence 4424	AA353766
Sequence 4373	AA287751	Sequence 4425	AA356682
Sequence 4374	AA287961	Sequence 4426	AA357811
Sequence 4375	AA291233	Sequence 4427	AA358450
Sequence 4376	AA291756	Sequence 4428	AA361403
Sequence 4377	AA292692	Sequence 4429	AA366865
Sequence 4378	AA292993	Sequence 4430	AA367471
Sequence 4379	AA296846	Sequence 4431	AA368520
Sequence 4380	AA297434	Sequence 4432	AA370337
Sequence 4381	AA297883	Sequence 4433	AA370352
Sequence 4382	AA298489	Sequence 4434	AA371017
Sequence 4383	AA298786	Sequence 4435	AA371265
Sequence 4384	AA298807	Sequence 4436	AA371626
Sequence 4385	AA299830	Sequence 4437	AA375853
Sequence 4386	AA300065	Sequence 4438	AA375988
Sequence 4387	AA302852	Sequence 4439	AA376870
Sequence 4388	AA302919	Sequence 4440	AA393480
Sequence 4389	AA306206	Sequence 4441	AA394298
Sequence 4390	AA306888	Sequence 4442	AA398686
Sequence 4391	AA307209	Sequence 4443	AA399133
Sequence 4392	AA307247	Sequence 4444	AA401339
Sequence 4393	AA307789	Sequence 4445	AA401480
Sequence 4394	AA309445	Sequence 4446	AA402095
Sequence 4395	AA310663	Sequence 4447	AA403051
Sequence 4396	AA310739	Sequence 4448	AA405663
Sequence 4397	AA312756	Sequence 4449	AA406475
Sequence 4398	AA313223	Sequence 4450	AA410580
Sequence 4399	AA314022	Sequence 4451	AA418796
Sequence 4400	AA314127	Sequence 4452	AA420845
Sequence 4401	AA314188	Sequence 4453	AA421021
Sequence 4402	AA314673	Sequence 4454	AA421562
Sequence 4403	AA314872	Sequence 4455	AA425394
Sequence 4404	AA315095	Sequence 4456	AA426351
Sequence 4405	AA315259	Sequence 4457	AA427477
Sequence 4406	AA315805	Sequence 4458	AA429912
Sequence 4407	AA315838	Sequence 4459	AA431677
Sequence 4408	AA316627	Sequence 4460	AA436377
Sequence 4409	AA318745	Sequence 4461	AA437224
Sequence 4410	AA320004	Sequence 4462	AA441885
Sequence 4411	AA322115	Sequence 4463	AA441918
Sequence 4412	AA325145	Sequence 4464	AA441959
Sequence 4413	AA325826	Sequence 4465	AA442287
Sequence 4414	AA330090	Sequence 4466	AA442372
Sequence 4415	AA333526	Sequence 4467	AA442829
Sequence 4416	AA334457	Sequence 4468	AA443750
Sequence 4417	AA334754	Sequence 4469	AA443790
Sequence 4418	AA335699	Sequence 4470	AA443946
Sequence 4419	AA336586	Sequence 4471	AA444074

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Sequence 4472	AA445955	Sequence 4524	AA508588
Sequence 4473	AA446116	Sequence 4525	AA508889
Sequence 4474	AA446149	Sequence 4526	AA508902
Sequence 4475	AA447322	Sequence 4527	AA512974
Sequence 4476	AA447948	Sequence 4528	AA513177
Sequence 4477	AA448036	Sequence 4529	AA513688
Sequence 4478	AA448531	Sequence 4530	AA515857
Sequence 4479	AA449604	Sequence 4531	AA516531
Sequence 4480	AA451633	Sequence 4532	AA522481
Sequence 4481	AA453612	Sequence 4533	AA522856
Sequence 4482	AA454208	Sequence 4534	AA522867
Sequence 4483	AA458514	Sequence 4535	AA523252
Sequence 4484	AA459617	Sequence 4536	AA523464
Sequence 4485	AA460120	Sequence 4537	AA523484
Sequence 4486	AA461082	Sequence 4538	AA523938
Sequence 4487	AA461548	Sequence 4539	AA524812
Sequence 4488	AA463198	Sequence 4540	AA526886
Sequence 4489	AA464133	Sequence 4541	AA527730
Sequence 4490	AA465193	Sequence 4542	AA527805
Sequence 4491	AA465258	Sequence 4543	AA528104
Sequence 4492	AA465293	Sequence 4544	AA531563
Sequence 4493	AA465387	Sequence 4545	AA533553
Sequence 4494	AA468839	Sequence 4546	AA533772
Sequence 4495	AA469151	Sequence 4547	AA534171
Sequence 4496	AA478514	Sequence 4548	AA534418
Sequence 4497	AA479327	Sequence 4549	AA534540
Sequence 4498	AA481001	Sequence 4550	AA534933
Sequence 4499	AA481303	Sequence 4551	AA535837
Sequence 4500	AA482654	Sequence 4552	AA541677
Sequence 4501	AA485861	Sequence 4553	AA541678
Sequence 4502	AA485906	Sequence 4554	AA541808
Sequence 4503	AA485996	Sequence 4555	AA542906
Sequence 4504	AA486628	Sequence 4556	AA548238
Sequence 4505	AA487261	Sequence 4557	AA551146
Sequence 4506	AA488227	Sequence 4558	AA565420
Sequence 4507	AA488744	Sequence 4559	AA565882
Sequence 4508	AA488809	Sequence 4560	AA569130
Sequence 4509	AA489020	Sequence 4561	AA569809
Sequence 4510	AA489433	Sequence 4562	AA573824
Sequence 4511	AA492042	Sequence 4563	AA574288
Sequence 4512	AA492280	Sequence 4564	AA574397
Sequence 4513	AA493512	Sequence 4565	AA576425
Sequence 4514	AA495759	Sequence 4566	AA578773
Sequence 4515	AA495938	Sequence 4567	AA580900
Sequence 4516	AA502979	Sequence 4568	AA581117
Sequence 4517	AA503182	Sequence 4569	AA582252
Sequence 4518	AA503215	Sequence 4570	AA582596
Sequence 4519	AA503265	Sequence 4571	AA588474
Sequence 4520	AA503731	Sequence 4572	AA600998
Sequence 4521	AA504238	Sequence 4573	AA602430
Sequence 4522	AA504340	Sequence 4574	AA602794
Sequence 4523	AA505198	Sequence 4575	AA603334

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Sequence 4576	AA604474	Sequence 4628	AA773641
Sequence 4577	AA612666	Sequence 4629	AA773787
Sequence 4578	AA612829	Sequence 4630	AA776585
Sequence 4579	AA612874	Sequence 4631	AA779176
Sequence 4580	AA618277	Sequence 4632	AA780591
Sequence 4581	AA620750	Sequence 4633	AA782138
Sequence 4582	AA625951	Sequence 4634	AA782644
Sequence 4583	AA626509	Sequence 4635	AA805865
Sequence 4584	AA628417	Sequence 4636	AA806808
Sequence 4585	AA629027	Sequence 4637	AA811365
Sequence 4586	AA631868	Sequence 4638	AA813108
Sequence 4587	AA639059	Sequence 4639	AA825612
Sequence 4588	AA639174	Sequence 4640	AA828708
Sequence 4589	AA639791	Sequence 4641	AA829473
Sequence 4590	AA640687	Sequence 4642	AA833543
Sequence 4591	AA641636	Sequence 4643	AA836233
Sequence 4592	AA641769	Sequence 4644	AA843242
Sequence 4593	AA641810	Sequence 4645	AA843414
Sequence 4594	AA642383	Sequence 4646	AA843663
Sequence 4595	AA643506	Sequence 4647	AA845340
Sequence 4596	AA644237	Sequence 4648	AA847380
Sequence 4597	AA650230	Sequence 4649	AA854293
Sequence 4598	AA652206	Sequence 4650	AA857509
Sequence 4599	AA652478	Sequence 4651	AA860541
Sequence 4600	AA662733	Sequence 4652	AA860986
Sequence 4601	AA664567	Sequence 4653	AA865873
Sequence 4602	AA665507	Sequence 4654	AA868720
Sequence 4603	AA679314	Sequence 4655	AA873182
Sequence 4604	AA679547	Sequence 4656	AA873291
Sequence 4605	AA687216	Sequence 4657	AA873828
Sequence 4606	AA702230	Sequence 4658	AA876668
Sequence 4607	AA706388	Sequence 4659	AA885770
Sequence 4608	AA707607	Sequence 4660	AA888014
Sequence 4609	AA708016	Sequence 4661	AA890327
Sequence 4610	AA708690	Sequence 4662	AA902127
Sequence 4611	AA714481	Sequence 4663	AA902721
Sequence 4612	AA722204	Sequence 4664	AA902964
Sequence 4613	AA724553	Sequence 4665	AA905139
Sequence 4614	AA737949	Sequence 4666	AA911245
Sequence 4615	AA743680	Sequence 4667	AA916753
Sequence 4616	AA744367	Sequence 4668	AA931228
Sequence 4617	AA744771	Sequence 4669	AA931237
Sequence 4618	AA747515	Sequence 4670	AA931583
Sequence 4619	AA747772	Sequence 4671	AA932114
Sequence 4620	AA748847	Sequence 4672	AA935526
Sequence 4621	AA761640	Sequence 4673	AA935560
Sequence 4622	AA764991	Sequence 4674	AA936262
Sequence 4623	AA765884	Sequence 4675	AA937551
Sequence 4624	AA765974	Sequence 4676	AA938717
Sequence 4625	AA766644	Sequence 4677	AA946873
Sequence 4626	AA769055	Sequence 4678	AA953892
Sequence 4627	AA773072	Sequence 4679	AA954118

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Sequence 4680 AA968756  
 Sequence 4681 AA974540  
 Sequence 4682 AA975275  
 Sequence 4683 AA977172  
 Sequence 4684 AA985327  
 Sequence 4685 AA987997  
 Sequence 4686 AA988125  
 Sequence 4687 AA988520  
 Sequence 4688 AA995981  
 Sequence 4689 AI004252  
 Sequence 4690 AI015053  
 Sequence 4691 AI017442  
 Sequence 4692 AI017996  
 Sequence 4693 AI023770  
 Sequence 4694 AI024638  
 Sequence 4695 AI024799  
 Sequence 4696 AI026122  
 Sequence 4697 AI027643  
 Sequence 4698 AI032759  
 Sequence 4699 AI033912  
 Sequence 4700 AI034131  
 Sequence 4701 AI038167  
 Sequence 4702 AI038415  
 Sequence 4703 AI040598  
 Sequence 4704 AI041616  
 Sequence 4705 AI042153  
 Sequence 4706 AI051210  
 Sequence 4707 AI051376  
 Sequence 4708 AI052453  
 Sequence 4709 AI061420  
 Sequence 4710 AI064763  
 Sequence 4711 AI066518  
 Sequence 4712 AI074969  
 Sequence 4713 AI075935  
 Sequence 4714 AI077439  
 Sequence 4715 AI078772  
 Sequence 4716 AI080439  
 Sequence 4717 AI080476  
 Sequence 4718 AI084101  
 Sequence 4719 AI085977  
 Sequence 4720 AI086377  
 Sequence 4721 AI087987  
 Sequence 4722 AI088201  
 Sequence 4723 AI091190  
 Sequence 4724 AI093553  
 Sequence 4725 AI125642  
 Sequence 4726 AI125688  
 Sequence 4727 AI126233  
 Sequence 4728 AI126700  
 Sequence 4729 AI127167  
 Sequence 4730 AI129321  
 Sequence 4731 AI141040

Sequence 4732 AI142257  
 Sequence 4733 AI144488  
 Sequence 4734 AI148552  
 Sequence 4735 AI148676  
 Sequence 4736 AI148933  
 Sequence 4737 AI159768  
 Sequence 4738 AI174675  
 Sequence 4739 AI198311  
 Sequence 4740 AI198577  
 Sequence 4741 AI198986  
 Sequence 4742 AI199094  
 Sequence 4743 AI199681  
 Sequence 4744 AI201483  
 Sequence 4745 AI203141  
 Sequence 4746 AI203395  
 Sequence 4747 AI207650  
 Sequence 4748 AI214272  
 Sequence 4749 AI214784  
 Sequence 4750 AI219278  
 Sequence 4751 AI220149  
 Sequence 4752 AI221713  
 Sequence 4753 AI245327  
 Sequence 4754 AI247078  
 Sequence 4755 AI248736  
 Sequence 4756 AI250092  
 Sequence 4757 AI253335  
 Sequence 4758 AI253348  
 Sequence 4759 AI253379  
 Sequence 4760 AI267185  
 Sequence 4761 AI267282  
 Sequence 4762 AI267454  
 Sequence 4763 AI267502  
 Sequence 4764 AI267574  
 Sequence 4765 AI268724  
 Sequence 4766 AI274786  
 Sequence 4767 AI278659  
 Sequence 4768 AI283489  
 Sequence 4769 AI288142  
 Sequence 4770 AI289059  
 Sequence 4771 AI299945  
 Sequence 4772 AI300489  
 Sequence 4773 AI301532  
 Sequence 4774 AI308800  
 Sequence 4775 AI310465  
 Sequence 4776 AI312542  
 Sequence 4777 AI313387  
 Sequence 4778 AI332588  
 Sequence 4779 AI333116  
 Sequence 4780 AI338338  
 Sequence 4781 AI339458  
 Sequence 4782 AI343692  
 Sequence 4783 AI346021

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Sequence 4784	AI346657	Sequence 4836	AI682088
Sequence 4785	AI357472	Sequence 4837	AI682937
Sequence 4786	AI358723	Sequence 4838	AI686779
Sequence 4787	AI366381	Sequence 4839	AI693302
Sequence 4788	AI366549	Sequence 4840	AI694199
Sequence 4789	AI373289	Sequence 4841	AI694596
Sequence 4790	AI394646	Sequence 4842	AI696992
Sequence 4791	AI400410	Sequence 4843	AI697849
Sequence 4792	AI420172	Sequence 4844	AI734266
Sequence 4793	AI421741	Sequence 4845	AI740796
Sequence 4794	AI423541	Sequence 4846	AI743852
Sequence 4795	AI432462	Sequence 4847	AI749547
Sequence 4796	AI434150	Sequence 4848	AI753784
Sequence 4797	AI452485	Sequence 4849	AI754013
Sequence 4798	AI457964	Sequence 4850	AI755085
Sequence 4799	AI458673	Sequence 4851	AI762085
Sequence 4800	AI460230	Sequence 4852	AI769392
Sequence 4801	AI467858	Sequence 4853	AI769478
Sequence 4802	AI475476	Sequence 4854	AI791370
Sequence 4803	AI478365	Sequence 4855	AI791906
Sequence 4804	AI493851	Sequence 4856	AI791998
Sequence 4805	AI521984	Sequence 4857	AI801810
Sequence 4806	AI524826	Sequence 4858	AI805379
Sequence 4807	AI525102	Sequence 4859	AI806044
Sequence 4808	AI546840	Sequence 4860	AI813772
Sequence 4809	AI557059	Sequence 4861	AI816102
Sequence 4810	AI557112	Sequence 4862	AI828602
Sequence 4811	AI557118	Sequence 4863	AI829784
Sequence 4812	AI557225	Sequence 4864	AI861997
Sequence 4813	AI557243	Sequence 4865	AI864927
Sequence 4814	AI557363	Sequence 4866	AI871027
Sequence 4815	AI557495	Sequence 4867	AI871745
Sequence 4816	AI559299	Sequence 4868	AI879995
Sequence 4817	AI559903	Sequence 4869	AI884963
Sequence 4818	AI560870	Sequence 4870	AI915264
Sequence 4819	AI564487	Sequence 4871	AI923011
Sequence 4820	AI589533	Sequence 4872	AI935704
Sequence 4821	AI608684	Sequence 4873	AI935710
Sequence 4822	AI608968	Sequence 4874	AI936472
Sequence 4823	AI610412	Sequence 4875	AI948822
Sequence 4824	AI619498	Sequence 4876	AI954585
Sequence 4825	AI620796	Sequence 4877	AI973022
Sequence 4826	AI627553	Sequence 4878	AI973109
Sequence 4827	AI635310	Sequence 4879	AI985122
Sequence 4828	AI635658	Sequence 4880	AL036594
Sequence 4829	AI635667	Sequence 4881	AL036801
Sequence 4830	AI659898	Sequence 4882	AL037456
Sequence 4831	AI660356	Sequence 4883	AL037895
Sequence 4832	AI660919	Sequence 4884	AL038821
Sequence 4833	AI671394	Sequence 4885	AL039175
Sequence 4834	AI679619	Sequence 4886	AL039235
Sequence 4835	AI680874	Sequence 4887	AL039293

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Sequence 4888	AL039349	Sequence 4940	H57382
Sequence 4889	AL040204	Sequence 4941	H65423
Sequence 4890	AL043702	Sequence 4942	H69529
Sequence 4891	AL044985	Sequence 4943	H83215
Sequence 4892	AL119715	Sequence 4944	H87419
Sequence 4893	AL120972	Sequence 4945	H95535
Sequence 4894	AW019951	Sequence 4946	H96053
Sequence 4895	AW020930	Sequence 4947	H96527
Sequence 4896	AW021628	Sequence 4948	N34611
Sequence 4897	AW022112	Sequence 4949	N35555
Sequence 4898	AW028521	Sequence 4950	N42986
Sequence 4899	AW052140	Sequence 4951	N47044
Sequence 4900	AW055209	Sequence 4952	N49471
Sequence 4901	AW058600	Sequence 4953	N49534
Sequence 4902	AW080631	Sequence 4954	N52554
Sequence 4903	AW080845	Sequence 4955	N76215
Sequence 4904	AW088727	Sequence 4956	N92498
Sequence 4905	AW131770	Sequence 4957	N94829
Sequence 4906	AW134672	Sequence 4958	N98569
Sequence 4907	AW135187	Sequence 4959	N98672
Sequence 4908	AW135430	Sequence 4960	R14008
Sequence 4909	AW135666	Sequence 4961	R17476
Sequence 4910	AW136951	Sequence 4962	R19498
Sequence 4911	AW138413	Sequence 4963	R19761
Sequence 4912	AW140049	Sequence 4964	R24400
Sequence 4913	AW148750	Sequence 4965	R25577
Sequence 4914	AW150770	Sequence 4966	R33762
Sequence 4915	AW160363	Sequence 4967	R34284
Sequence 4916	AW178825	Sequence 4968	R35797
Sequence 4917	C05816	Sequence 4969	R49734
Sequence 4918	C06196	Sequence 4970	R52387
Sequence 4919	C06419	Sequence 4971	R59846
Sequence 4920	D58694	Sequence 4972	R61601
Sequence 4921	F07635	Sequence 4973	R63823
Sequence 4922	F12493	Sequence 4974	R70570
Sequence 4923	F13272	Sequence 4975	R75754
Sequence 4924	F22763	Sequence 4976	T29959
Sequence 4925	F33993	Sequence 4977	T34760
Sequence 4926	H00742	Sequence 4978	T48624
Sequence 4927	H02725	Sequence 4979	T66793
Sequence 4928	H03785	Sequence 4980	T70123
Sequence 4929	H08511	Sequence 4981	T72034
Sequence 4930	H09882	Sequence 4982	T83709
Sequence 4931	H12923	Sequence 4983	T86219
Sequence 4932	H13008	Sequence 4984	T89530
Sequence 4933	H13406	Sequence 4985	T99386
Sequence 4934	H13891	Sequence 4986	W03386
Sequence 4935	H20744	Sequence 4987	W04191
Sequence 4936	H25211	Sequence 4988	W05240
Sequence 4937	H49331	Sequence 4989	W05402
Sequence 4938	H49828	Sequence 4990	W06897
Sequence 4939	H54240	Sequence 4991	W19970



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Sequence 4992	W21894	Sequence 5044	AB018340
Sequence 4993	W22330	Sequence 5045	AB018346
Sequence 4994	W24228	Sequence 5046	AB019568
Sequence 4995	W26413	Sequence 5047	AB020631
Sequence 4996	W30686	Sequence 5048	AB020643
Sequence 4997	W31819	Sequence 5049	AB020657
Sequence 4998	W37614	Sequence 5050	AB020694
Sequence 4999	W44623	Sequence 5051	AB020724
Sequence 5000	W44911	Sequence 5052	AB021663
Sequence 5001	W44954	Sequence 5053	AB021981
Sequence 5002	W56395	Sequence 5054	AB023157
Sequence 5003	W60565	Sequence 5055	AB023173
Sequence 5004	W61042	Sequence 5056	AB023177
Sequence 5005	W72973	Sequence 5057	AB023227
Sequence 5006	W74046	Sequence 5058	AB023230
Sequence 5007	W80673	Sequence 5059	AB024334
Sequence 5008	W96214	Sequence 5060	AB024435
Sequence 5009	Z43304	Sequence 5061	AB026257
Sequence 5010	A06805	Sequence 5062	AB028624
Sequence 5011	A06846	Sequence 5063	AB028973
Sequence 5012	A06919	Sequence 5064	AB028995
Sequence 5013	A16794	Sequence 5065	AB029036
Sequence 5014	AB000888	Sequence 5066	AB032948
Sequence 5015	AB001106	Sequence 5067	AB032983
Sequence 5016	AB002303	Sequence 5068	AB033042
Sequence 5017	AB002330	Sequence 5069	AB033071
Sequence 5018	AB002347	Sequence 5070	AB033075
Sequence 5019	AB002365	Sequence 5071	AB033076
Sequence 5020	AB002369	Sequence 5072	AB033078
Sequence 5021	AB002370	Sequence 5073	AB033079
Sequence 5022	AB002382	Sequence 5074	AB033080
Sequence 5023	AB004047	Sequence 5075	AB033092
Sequence 5024	AB004857	Sequence 5076	AB033899
Sequence 5025	AB007510	Sequence 5077	AD001528
Sequence 5026	AB007896	Sequence 5078	AF000652
Sequence 5027	AB007899	Sequence 5079	AF000982
Sequence 5028	AB007916	Sequence 5080	AF000983
Sequence 5029	AB007931	Sequence 5081	AF001902
Sequence 5030	AB007934	Sequence 5082	AF002668
Sequence 5031	AB007956	Sequence 5083	AF002697
Sequence 5032	AB007969	Sequence 5084	AF006088
Sequence 5033	AB008226	Sequence 5085	AF007216
Sequence 5034	AB009285	Sequence 5086	AF007791
Sequence 5035	AB011004	Sequence 5087	AF008442
Sequence 5036	AB011079	Sequence 5088	AF010233
Sequence 5037	AB011148	Sequence 5089	AF013759
Sequence 5038	AB011159	Sequence 5090	AF015553
Sequence 5039	AB014560	Sequence 5091	AF016371
Sequence 5040	AB015317	Sequence 5092	AF019214
Sequence 5041	AB016068	Sequence 5093	AF019226
Sequence 5042	AB018266	Sequence 5094	AF020736
Sequence 5043	AB018337	Sequence 5095	AF020797

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Sequence 5096	AF021351	Sequence 5148	AF073299
Sequence 5097	AF026166	Sequence 5149	AF074606
Sequence 5098	AF026246	Sequence 5150	AF075061
Sequence 5099	AF027824	Sequence 5151	AF077030
Sequence 5100	AF028593	Sequence 5152	AF077202
Sequence 5101	AF028832	Sequence 5153	AF078845
Sequence 5102	AF029669	Sequence 5154	AF078855
Sequence 5103	AF030162	Sequence 5155	AF078860
Sequence 5104	AF033095	Sequence 5156	AF081282
Sequence 5105	AF035285	Sequence 5157	AF083106
Sequence 5106	AF035293	Sequence 5158	AF085224
Sequence 5107	AF035316	Sequence 5159	AF085845
Sequence 5108	AF037447	Sequence 5160	AF085871
Sequence 5109	AF038187	Sequence 5161	AF085896
Sequence 5110	AF038451	Sequence 5162	AF086172
Sequence 5111	AF038452	Sequence 5163	AF086245
Sequence 5112	AF038955	Sequence 5164	AF086336
Sequence 5113	AF039023	Sequence 5165	AF087980
Sequence 5114	AF039918	Sequence 5166	AF091084
Sequence 5115	AF042181	Sequence 5167	AF092092
Sequence 5116	AF044953	Sequence 5168	AF092138
Sequence 5117	AF044956	Sequence 5169	AF097514
Sequence 5118	AF047020	Sequence 5170	AF097725
Sequence 5119	AF047470	Sequence 5171	AF099137
Sequence 5120	AF047472	Sequence 5172	AF100756
Sequence 5121	AF048731	Sequence 5173	AF101074
Sequence 5122	AF051334	Sequence 5174	AF102846
Sequence 5123	AF052107	Sequence 5175	AF103907
Sequence 5124	AF052154	Sequence 5176	AF106681
Sequence 5125	AF053535	Sequence 5177	AF106862
Sequence 5126	AF053641	Sequence 5178	AF109219
Sequence 5127	AF054181	Sequence 5179	AF110377
Sequence 5128	AF054186	Sequence 5180	AF111106
Sequence 5129	AF054187	Sequence 5181	AF118838
Sequence 5130	AF054284	Sequence 5182	AF124141
Sequence 5131	AF054838	Sequence 5183	AF124438
Sequence 5132	AF054990	Sequence 5184	AF124598
Sequence 5133	AF057160	Sequence 5185	AF126245
Sequence 5134	AF061258	Sequence 5186	AF131743
Sequence 5135	AF061739	Sequence 5187	AF131775
Sequence 5136	AF062323	Sequence 5188	AF131831
Sequence 5137	AF064257	Sequence 5189	AF131856
Sequence 5138	AF064768	Sequence 5190	AF131857
Sequence 5139	AF068235	Sequence 5191	AF132000
Sequence 5140	AF070523	Sequence 5192	AF132940
Sequence 5141	AF070556	Sequence 5193	AF132965
Sequence 5142	AF070561	Sequence 5194	AF133123
Sequence 5143	AF070621	Sequence 5195	AF135421
Sequence 5144	AF070646	Sequence 5196	AF144103
Sequence 5145	AF070659	Sequence 5197	AF144566
Sequence 5146	AF070661	Sequence 5198	AF146277
Sequence 5147	AF071202	Sequence 5199	AF147331

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Sequence 5200	AF151103	Sequence 5252	AL079298
Sequence 5201	AF151109	Sequence 5253	AL080059
Sequence 5202	AF151840	Sequence 5254	AL080084
Sequence 5203	AF151851	Sequence 5255	AL080118
Sequence 5204	AF151871	Sequence 5256	AL080192
Sequence 5205	AF151875	Sequence 5257	AL080209
Sequence 5206	AF151897	Sequence 5258	AL080212
Sequence 5207	AF152097	Sequence 5259	AL110126
Sequence 5208	AF153608	Sequence 5260	AL110177
Sequence 5209	AF155099	Sequence 5261	AL110183
Sequence 5210	AF156098	Sequence 5262	AL110207
Sequence 5211	AF159056	Sequence 5263	AL110222
Sequence 5212	AF159615	Sequence 5264	AL110233
Sequence 5213	AF168956	Sequence 5265	AL110241
Sequence 5214	AF171877	Sequence 5266	AL117392
Sequence 5215	AF174605	Sequence 5267	AL117616
Sequence 5216	AF176555	Sequence 5268	AL122121
Sequence 5217	AF176574	Sequence 5269	AL133108
Sequence 5218	AF176700	Sequence 5270	AL133117
Sequence 5219	AF188746	Sequence 5271	D10040
Sequence 5220	AF188747	Sequence 5272	D13286
Sequence 5221	AF201077	Sequence 5273	D13315
Sequence 5222	AJ001381	Sequence 5274	D13388
Sequence 5223	AJ001443	Sequence 5275	D13627
Sequence 5224	AJ002744	Sequence 5276	D13630
Sequence 5225	AJ002955	Sequence 5277	D13641
Sequence 5226	AJ004913	Sequence 5278	D13866
Sequence 5227	AJ005821	Sequence 5279	D13900
Sequence 5228	AJ007398	Sequence 5280	D14446
Sequence 5229	AJ011007	Sequence 5281	D14530
Sequence 5230	AJ012499	Sequence 5282	D14657
Sequence 5231	AJ223352	Sequence 5283	D14658
Sequence 5232	AJ223353	Sequence 5284	D14696
Sequence 5233	AJ224326	Sequence 5285	D14710
Sequence 5234	AJ249248	Sequence 5286	D14812
Sequence 5235	AL049266	Sequence 5287	D14878
Sequence 5236	AL049447	Sequence 5288	D16307
Sequence 5237	AL049471	Sequence 5289	D16960
Sequence 5238	AL049705	Sequence 5290	D17039
Sequence 5239	AL049932	Sequence 5291	D17130
Sequence 5240	AL049969	Sequence 5292	D17400
Sequence 5241	AL049996	Sequence 5293	D21163
Sequence 5242	AL050013	Sequence 5294	D21260
Sequence 5243	AL050018	Sequence 5295	D25283
Sequence 5244	AL050035	Sequence 5296	D25542
Sequence 5245	AL050064	Sequence 5297	D26129
Sequence 5246	AL050071	Sequence 5298	D26600
Sequence 5247	AL050161	Sequence 5299	D29640
Sequence 5248	AL050186	Sequence 5300	D29954
Sequence 5249	AL050204	Sequence 5301	D31885
Sequence 5250	AL050268	Sequence 5302	D37991
Sequence 5251	AL079288	Sequence 5303	D38305

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Sequence 5304	D38551	Sequence 5356	K00558
Sequence 5305	D38552	Sequence 5357	K01911
Sequence 5306	D42047	Sequence 5358	L01100
Sequence 5307	D42138	Sequence 5359	L02426
Sequence 5308	D45887	Sequence 5360	L05425
Sequence 5309	D49396	Sequence 5361	L06132
Sequence 5310	D50487	Sequence 5362	L06133
Sequence 5311	D50525	Sequence 5363	L06850
Sequence 5312	D50926	Sequence 5364	L07633
Sequence 5313	D63480	Sequence 5365	L07758
Sequence 5314	D64015	Sequence 5366	L08441
Sequence 5315	D78333	Sequence 5367	L10284
Sequence 5316	D79996	Sequence 5368	L10678
Sequence 5317	D80005	Sequence 5369	L11566
Sequence 5318	D80009	Sequence 5370	L11667
Sequence 5319	D82345	Sequence 5371	L12686
Sequence 5320	D85777	Sequence 5372	L13977
Sequence 5321	D86322	Sequence 5373	L15203
Sequence 5322	D86971	Sequence 5374	L17128
Sequence 5323	D87443	Sequence 5375	L29158
Sequence 5324	D87444	Sequence 5376	L34839
Sequence 5325	D87453	Sequence 5377	L34840
Sequence 5326	D87742	Sequence 5378	L35249
Sequence 5327	D87845	Sequence 5379	L37080
Sequence 5328	D88674	Sequence 5380	L38608
Sequence 5329	D89053	Sequence 5381	L38951
Sequence 5330	D89667	Sequence 5382	L38961
Sequence 5331	D89675	Sequence 5383	L47647
Sequence 5332	D90373	Sequence 5384	M10036
Sequence 5333	E01574	Sequence 5385	M10119
Sequence 5334	E01650	Sequence 5386	M11058
Sequence 5335	E02628	Sequence 5387	M11353
Sequence 5336	E03414	Sequence 5388	M11887
Sequence 5337	E03569	Sequence 5389	M11949
Sequence 5338	E05957	Sequence 5390	M15885
Sequence 5339	E06721	Sequence 5391	M15887
Sequence 5340	J02642	Sequence 5392	M15990
Sequence 5341	J02888	Sequence 5393	M16247
Sequence 5342	J02923	Sequence 5394	M16768
Sequence 5343	J02966	Sequence 5395	M16804
Sequence 5344	J03007	Sequence 5396	M16827
Sequence 5345	J03015	Sequence 5397	M17323
Sequence 5346	J03143	Sequence 5398	M19961
Sequence 5347	J03248	Sequence 5399	M20372
Sequence 5348	J03503	Sequence 5400	M20471
Sequence 5349	J03575	Sequence 5401	M21154
Sequence 5350	J03592	Sequence 5402	M21895
Sequence 5351	J03934	Sequence 5403	M22382
Sequence 5352	J04162	Sequence 5404	M22590
Sequence 5353	J04183	Sequence 5405	M23161
Sequence 5354	J05021	Sequence 5406	M23613
Sequence 5355	J05480	Sequence 5407	M24194

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Sequence 5408	M24902	Sequence 5460	U05877
Sequence 5409	M26325	Sequence 5461	U07151
Sequence 5410	M26481	Sequence 5462	U07919
Sequence 5411	M26663	Sequence 5463	U10485
Sequence 5412	M27504	Sequence 5464	U12465
Sequence 5413	M27691	Sequence 5465	U12789
Sequence 5414	M28211	Sequence 5466	U13616
Sequence 5415	M28372	Sequence 5467	U14750
Sequence 5416	M28526	Sequence 5468	U14967
Sequence 5417	M29064	Sequence 5469	U14968
Sequence 5418	M29872	Sequence 5470	U14970
Sequence 5419	M31630	Sequence 5471	U15008
Sequence 5420	M33197	Sequence 5472	U17040
Sequence 5421	M34175	Sequence 5473	U18197
Sequence 5422	M34181	Sequence 5474	U18914
Sequence 5423	M34840	Sequence 5475	U19177
Sequence 5424	M35252	Sequence 5476	U25182
Sequence 5425	M36634	Sequence 5477	U25789
Sequence 5426	M37400	Sequence 5478	U27143
Sequence 5427	M37583	Sequence 5479	U28249
Sequence 5428	M38690	Sequence 5480	U30826
Sequence 5429	M55409	Sequence 5481	U31383
Sequence 5430	M55536	Sequence 5482	U33760
Sequence 5431	M58581	Sequence 5483	U33821
Sequence 5432	M59465	Sequence 5484	U34252
Sequence 5433	M62401	Sequence 5485	U37230
Sequence 5434	M63573	Sequence 5486	U37518
Sequence 5435	M65131	Sequence 5487	U39400
Sequence 5436	M69226	Sequence 5488	U40272
Sequence 5437	M69238	Sequence 5489	U42404
Sequence 5438	M74091	Sequence 5490	U43899
Sequence 5439	M74509	Sequence 5491	U47414
Sequence 5440	M74777	Sequence 5492	U54558
Sequence 5441	M81757	Sequence 5493	U57052
Sequence 5442	M82919	Sequence 5494	U57057
Sequence 5443	M84443	Sequence 5495	U58855
Sequence 5444	M86917	Sequence 5496	U59919
Sequence 5445	M90054	Sequence 5497	U60205
Sequence 5446	M90309	Sequence 5498	U61232
Sequence 5447	M90516	Sequence 5499	U62740
Sequence 5448	M94856	Sequence 5500	U63542
Sequence 5449	M95724	Sequence 5501	U68140
Sequence 5450	M96803	Sequence 5502	U68758
Sequence 5451	S50223	Sequence 5503	U70063
Sequence 5452	S57235	Sequence 5504	U70322
Sequence 5453	S59049	Sequence 5505	U70451
Sequence 5454	S64650	Sequence 5506	U72761
Sequence 5455	S68015	Sequence 5507	U75272
Sequence 5456	S69272	Sequence 5508	U75679
Sequence 5457	S73498	Sequence 5509	U78575
Sequence 5458	U02680	Sequence 5510	U80034
Sequence 5459	U05291	Sequence 5511	U83115

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Sequence 5512	U85658	Sequence 5564	X97065
Sequence 5513	U87166	Sequence 5565	X97675
Sequence 5514	U90915	Sequence 5566	X98263
Sequence 5515	U96759	Sequence 5567	Y00282
Sequence 5516	V00478	Sequence 5568	Y00345
Sequence 5517	X02530	Sequence 5569	Y08991
Sequence 5518	X04098	Sequence 5570	Y09615
Sequence 5519	X05332	Sequence 5571	Y09836
Sequence 5520	X05345	Sequence 5572	Y12065
Sequence 5521	X06272	Sequence 5573	Y12860
Sequence 5522	X06617	Sequence 5574	Y13286
Sequence 5523	X12433	Sequence 5575	Y15286
Sequence 5524	X12791	Sequence 5576	Y16132
Sequence 5525	X13425	Sequence 5577	Y16241
Sequence 5526	X13482	Sequence 5578	Y16414
Sequence 5527	X13585	Sequence 5579	Y18314
Sequence 5528	X13839	Sequence 5580	Z21507
Sequence 5529	X15187	Sequence 5581	Z22658
Sequence 5530	X15729	Sequence 5582	Z36531
Sequence 5531	X52882	Sequence 5583	Z37986
Sequence 5532	X53605	Sequence 5584	Z47087
Sequence 5533	X53793	Sequence 5585	Z47553
Sequence 5534	X54199	Sequence 5586	N91825
Sequence 5535	X54473	Sequence 5587	Q92813
Sequence 5536	X56932	Sequence 5588	T47520
Sequence 5537	X61970	Sequence 5589	T59274
Sequence 5538	X62534	Sequence 5590	T84934
Sequence 5539	X63753	Sequence 5591	V04715
Sequence 5540	X64330	Sequence 5592	V07572
Sequence 5541	X64838	Sequence 5593	V44867
Sequence 5542	X66276	Sequence 5594	V58694
Sequence 5543	X66785	Sequence 5595	V62427
Sequence 5544	X67098	Sequence 5596	V63172
Sequence 5545	X73114	Sequence 5597	V70354
Sequence 5546	X73608	Sequence 5598	X03841
Sequence 5547	X76770	Sequence 5599	X24060
Sequence 5548	X76771	Sequence 5600	X26850
Sequence 5549	X77196	Sequence 5601	X27262
Sequence 5550	X78627	Sequence 5602	X29296
Sequence 5551	X79201	Sequence 5603	X37405
Sequence 5552	X81198	Sequence 5604	X37486
Sequence 5553	X81695	Sequence 5605	X40518
Sequence 5554	X82157	Sequence 5606	X41115
Sequence 5555	X84908	Sequence 5607	X52268
Sequence 5556	X85337	Sequence 5608	X87388
Sequence 5557	X85372	Sequence 5609	X89852
Sequence 5558	X85373	Sequence 5610	Z00428
Sequence 5559	X86098	Sequence 5611	Z13254
Sequence 5560	X87176	Sequence 5612	Z14392
Sequence 5561	X87949	Sequence 5613	Z15132
Sequence 5562	X94323	Sequence 5614	AC29430
Sequence 5563	X95384	Sequence 5615	A06919

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Sequence 5616	A06925	Sequence 5668	AJ132637
Sequence 5617	AB002370	Sequence 5669	AJ250042
Sequence 5618	AB002375	Sequence 5670	AL049932
Sequence 5619	AB006534	Sequence 5671	AL117499
Sequence 5620	AB007510	Sequence 5672	D30655
Sequence 5621	AB007899	Sequence 5673	D38551
Sequence 5622	AB011079	Sequence 5674	D42044
Sequence 5623	AB014458	Sequence 5675	D49396
Sequence 5624	AB015639	Sequence 5676	D50371
Sequence 5625	AB016068	Sequence 5677	D50525
Sequence 5626	AB018276	Sequence 5678	E02628
Sequence 5627	AB018313	Sequence 5679	J02959
Sequence 5628	AB020646	Sequence 5680	J03007
Sequence 5629	AB020693	Sequence 5681	K01144
Sequence 5630	AB020694	Sequence 5682	K01911
Sequence 5631	AB023173	Sequence 5683	L09235
Sequence 5632	AB023182	Sequence 5684	L10678
Sequence 5633	AB023227	Sequence 5685	L12136
Sequence 5634	AB033114	Sequence 5686	L15203
Sequence 5635	AF007791	Sequence 5687	L34839
Sequence 5636	AF015040	Sequence 5688	M10119
Sequence 5637	AF016371	Sequence 5689	M13231
Sequence 5638	AF019632	Sequence 5690	M15885
Sequence 5639	AF020797	Sequence 5691	M16553
Sequence 5640	AF044195	Sequence 5692	M16768
Sequence 5641	AF047020	Sequence 5693	M17885
Sequence 5642	AF052642	Sequence 5694	M24902
Sequence 5643	AF061258	Sequence 5695	M26663
Sequence 5644	AF067008	Sequence 5696	M74777
Sequence 5645	AF070525	Sequence 5697	M97935
Sequence 5646	AF070561	Sequence 5698	S69272
Sequence 5647	AF071202	Sequence 5699	S69738
Sequence 5648	AF077202	Sequence 5700	S75755
Sequence 5649	AF078854	Sequence 5701	U07919
Sequence 5650	AF085845	Sequence 5702	U21936
Sequence 5651	AF093097	Sequence 5703	U40272
Sequence 5652	AF100756	Sequence 5704	U42404
Sequence 5653	AF100759	Sequence 5705	U79751
Sequence 5654	AF103907	Sequence 5706	U96759
Sequence 5655	AF104914	Sequence 5707	X05606
Sequence 5656	AF126008	Sequence 5708	X06617
Sequence 5657	AF126736	Sequence 5709	X12791
Sequence 5658	AF131856	Sequence 5710	X15187
Sequence 5659	AF132000	Sequence 5711	X52174
Sequence 5660	AF146277	Sequence 5712	X78627
Sequence 5661	AF151103	Sequence 5713	X85372
Sequence 5662	AF151893	Sequence 5714	X92845
Sequence 5663	AF153612	Sequence 5715	X94323
Sequence 5664	AF159056	Sequence 5716	Y00345
Sequence 5665	AF188746	Sequence 5717	Z11793
Sequence 5666	AF191298	Sequence 5718	AA026715
Sequence 5667	AJ002744	Sequence 5719	AA033901

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Sequence 5720	AA035189	Sequence 5772	AA485217
Sequence 5721	AA043802	Sequence 5773	AA485935
Sequence 5722	AA081708	Sequence 5774	AA489433
Sequence 5723	AA083482	Sequence 5775	AA491041
Sequence 5724	AA092533	Sequence 5776	AA491249
Sequence 5725	AA094656	Sequence 5777	AA505076
Sequence 5726	AA100486	Sequence 5778	AA506953
Sequence 5727	AA128739	Sequence 5779	AA507804
Sequence 5728	AA133307	Sequence 5780	AA515143
Sequence 5729	AA135001	Sequence 5781	AA533057
Sequence 5730	AA148729	Sequence 5782	AA541587
Sequence 5731	AA156369	Sequence 5783	AA573762
Sequence 5732	AA156971	Sequence 5784	AA578209
Sequence 5733	AA171510	Sequence 5785	AA578773
Sequence 5734	AA172266	Sequence 5786	AA581222
Sequence 5735	AA179315	Sequence 5787	AA602522
Sequence 5736	AA181102	Sequence 5788	AA602957
Sequence 5737	AA182502	Sequence 5789	AA609384
Sequence 5738	AA189150	Sequence 5790	AA644495
Sequence 5739	AA203252	Sequence 5791	AA652478
Sequence 5740	AA205496	Sequence 5792	AA659693
Sequence 5741	AA224124	Sequence 5793	AA683246
Sequence 5742	AA225115	Sequence 5794	AA687216
Sequence 5743	AA236774	Sequence 5795	AA708003
Sequence 5744	AA249195	Sequence 5796	AA759202
Sequence 5745	AA258750	Sequence 5797	AA760894
Sequence 5746	AA262783	Sequence 5798	AA779728
Sequence 5747	AA278475	Sequence 5799	AA806808
Sequence 5748	AA291041	Sequence 5800	AA831278
Sequence 5749	AA292642	Sequence 5801	AA861930
Sequence 5750	AA298475	Sequence 5802	AA878195
Sequence 5751	AA299404	Sequence 5803	AA913138
Sequence 5752	AA305599	Sequence 5804	AA935560
Sequence 5753	AA306883	Sequence 5805	AA947278
Sequence 5754	AA321319	Sequence 5806	AA953892
Sequence 5755	AA333358	Sequence 5807	AA974999
Sequence 5756	AA339960	Sequence 5808	AA975275
Sequence 5757	AA370352	Sequence 5809	AA984134
Sequence 5758	AA370501	Sequence 5810	AI018034
Sequence 5759	AA371265	Sequence 5811	AI018625
Sequence 5760	AA393313	Sequence 5812	AI049995
Sequence 5761	AA400692	Sequence 5813	AI084651
Sequence 5762	AA422007	Sequence 5814	AI090226
Sequence 5763	AA433848	Sequence 5815	AI125642
Sequence 5764	AA441885	Sequence 5816	AI126233
Sequence 5765	AA447401	Sequence 5817	AI133406
Sequence 5766	AA454557	Sequence 5818	AI133727
Sequence 5767	AA455668	Sequence 5819	AI200578
Sequence 5768	AA468839	Sequence 5820	AI282318
Sequence 5769	AA478518	Sequence 5821	AI300489
Sequence 5770	AA479342	Sequence 5822	AI309401
Sequence 5771	AA479860	Sequence 5823	AI422907



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Sequence 5824	AI453358	Sequence 5876	U73642
Sequence 5825	AI460230	Sequence 5877	AC005880
Sequence 5826	AI479021	Sequence 5878	AF178030
Sequence 5827	AI480214	Sequence 5879	AF072847
Sequence 5828	AI497759	Sequence 5880	AL121790
Sequence 5829	AI557112	Sequence 5881	AC007279
Sequence 5830	AI581840	Sequence 5882	AA001116
Sequence 5831	AI632108	Sequence 5883	AA001734
Sequence 5832	AI678832	Sequence 5884	AA001794
Sequence 5833	AI734266	Sequence 5885	AA004802
Sequence 5834	AI755085	Sequence 5886	AA009818
Sequence 5835	AI796571	Sequence 5887	AA009878
Sequence 5836	AI815454	Sequence 5888	AA010174
Sequence 5837	AI864040	Sequence 5889	AA010682
Sequence 5838	AI884963	Sequence 5890	AA010981
Sequence 5839	AL037316	Sequence 5891	AA011070
Sequence 5840	AL037732	Sequence 5892	AA013090
Sequence 5841	AL039293	Sequence 5893	AA017474
Sequence 5842	AL039599	Sequence 5894	AA018591
Sequence 5843	AW014145	Sequence 5895	AA019781
Sequence 5844	AW020934	Sequence 5896	AA019874
Sequence 5845	AW085924	Sequence 5897	AA022636
Sequence 5846	AW135430	Sequence 5898	AA022937
Sequence 5847	AW173228	Sequence 5899	AA024796
Sequence 5848	D58694	Sequence 5900	AA025089
Sequence 5849	H51866	Sequence 5901	AA025968
Sequence 5850	N40017	Sequence 5902	AA026983
Sequence 5851	R22748	Sequence 5903	AA029039
Sequence 5852	R24400	Sequence 5904	AA029070
Sequence 5853	R49734	Sequence 5905	AA029143
Sequence 5854	R61436	Sequence 5906	AA029276
Sequence 5855	R78584	Sequence 5907	AA029676
Sequence 5856	T81995	Sequence 5908	AA032220
Sequence 5857	T99386	Sequence 5909	AA033651
Sequence 5858	W24708	Sequence 5910	AA033907
Sequence 5859	T59274	Sequence 5911	AA034979
Sequence 5860	X06834	Sequence 5912	AA035790
Sequence 5861	X24060	Sequence 5913	AA037210
Sequence 5862	X27262	Sequence 5914	AA037483
Sequence 5863	X52268	Sequence 5915	AA037886
Sequence 5864	Z13254	Sequence 5916	AA039381
Sequence 5865	AC36079	Sequence 5917	AA040810
Sequence 5866	AC003991	Sequence 5918	AA043137
Sequence 5867	AC007275	Sequence 5919	AA043159
Sequence 5868	AP000502	Sequence 5920	AA043415
Sequence 5869	AC007239	Sequence 5921	AA044239
Sequence 5870	AC000065	Sequence 5922	AA044941
Sequence 5871	AC005881	Sequence 5923	AA045147
Sequence 5872	AC004982	Sequence 5924	AA045410
Sequence 5873	AC003991	Sequence 5925	AA045803
Sequence 5874	AC004022	Sequence 5926	AA046848
Sequence 5875	AC004706	Sequence 5927	AA046973

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Sequence 5928	AA046981	Sequence 5980	AA099110
Sequence 5929	AA053909	Sequence 5981	AA099976
Sequence 5930	AA054492	Sequence 5982	AA100852
Sequence 5931	AA056060	Sequence 5983	AA101777
Sequence 5932	AA056358	Sequence 5984	AA112626
Sequence 5933	AA056365	Sequence 5985	AA113403
Sequence 5934	AA056396	Sequence 5986	AA115021
Sequence 5935	AA056528	Sequence 5987	AA115297
Sequence 5936	AA057071	Sequence 5988	AA115838
Sequence 5937	AA057290	Sequence 5989	AA115933
Sequence 5938	AA058398	Sequence 5990	AA121419
Sequence 5939	AA058899	Sequence 5991	AA126029
Sequence 5940	AA058902	Sequence 5992	AA126742
Sequence 5941	AA062583	Sequence 5993	AA128114
Sequence 5942	AA062994	Sequence 5994	AA128647
Sequence 5943	AA063247	Sequence 5995	AA128668
Sequence 5944	AA069367	Sequence 5996	AA129772
Sequence 5945	AA069561	Sequence 5997	AA129964
Sequence 5946	AA071165	Sequence 5998	AA130207
Sequence 5947	AA074086	Sequence 5999	AA130349
Sequence 5948	AA074183	Sequence 6000	AA131227
Sequence 5949	AA074445	Sequence 6001	AA131252
Sequence 5950	AA074509	Sequence 6002	AA131284
Sequence 5951	AA075460	Sequence 6003	AA131793
Sequence 5952	AA076295	Sequence 6004	AA132510
Sequence 5953	AA081007	Sequence 6005	AA132792
Sequence 5954	AA081355	Sequence 6006	AA133068
Sequence 5955	AA082209	Sequence 6007	AA133268
Sequence 5956	AA082572	Sequence 6008	AA133788
Sequence 5957	AA083410	Sequence 6009	AA134701
Sequence 5958	AA083411	Sequence 6010	AA135870
Sequence 5959	AA083482	Sequence 6011	AA137165
Sequence 5960	AA083510	Sequence 6012	AA143242
Sequence 5961	AA083772	Sequence 6013	AA143523
Sequence 5962	AA083836	Sequence 6014	AA143548
Sequence 5963	AA084221	Sequence 6015	AA146582
Sequence 5964	AA084698	Sequence 6016	AA146900
Sequence 5965	AA085480	Sequence 6017	AA147608
Sequence 5966	AA086007	Sequence 6018	AA147812
Sequence 5967	AA088679	Sequence 6019	AA148019
Sequence 5968	AA088758	Sequence 6020	AA148269
Sequence 5969	AA090106	Sequence 6021	AA148569
Sequence 5970	AA090203	Sequence 6022	AA149490
Sequence 5971	AA090548	Sequence 6023	AA149543
Sequence 5972	AA091275	Sequence 6024	AA149551
Sequence 5973	AA092060	Sequence 6025	AA149579
Sequence 5974	AA092343	Sequence 6026	AA149852
Sequence 5975	AA092532	Sequence 6027	AA150480
Sequence 5976	AA092533	Sequence 6028	AA150650
Sequence 5977	AA093935	Sequence 6029	AA150780
Sequence 5978	AA094331	Sequence 6030	AA150891
Sequence 5979	AA094656	Sequence 6031	AA151596

Table 4-1

Sequence 6032	AA152073	Sequence 6084	AA203206
Sequence 6033	AA152266	Sequence 6085	AA203285
Sequence 6034	AA152440	Sequence 6086	AA203637
Sequence 6035	AA155828	Sequence 6087	AA205033
Sequence 6036	AA155865	Sequence 6088	AA205647
Sequence 6037	AA156369	Sequence 6089	AA205857
Sequence 6038	AA157632	Sequence 6090	AA206769
Sequence 6039	AA159272	Sequence 6091	AA210760
Sequence 6040	AA159647	Sequence 6092	AA214668
Sequence 6041	AA159771	Sequence 6093	AA214688
Sequence 6042	AA160677	Sequence 6094	AA218788
Sequence 6043	AA165027	Sequence 6095	AA223249
Sequence 6044	AA165082	Sequence 6096	AA223433
Sequence 6045	AA165165	Sequence 6097	AA223956
Sequence 6046	AA165632	Sequence 6098	AA224124
Sequence 6047	AA166707	Sequence 6099	AA224994
Sequence 6048	AA167399	Sequence 6100	AA225115
Sequence 6049	AA169507	Sequence 6101	AA225294
Sequence 6050	AA171510	Sequence 6102	AA225488
Sequence 6051	AA173391	Sequence 6103	AA226171
Sequence 6052	AA173559	Sequence 6104	AA226234
Sequence 6053	AA177050	Sequence 6105	AA226321
Sequence 6054	AA179187	Sequence 6106	AA228273
Sequence 6055	AA179462	Sequence 6107	AA228431
Sequence 6056	AA179487	Sequence 6108	AA228822
Sequence 6057	AA180137	Sequence 6109	AA228940
Sequence 6058	AA180154	Sequence 6110	AA229495
Sequence 6059	AA181618	Sequence 6111	AA229611
Sequence 6060	AA182457	Sequence 6112	AA232691
Sequence 6061	AA186538	Sequence 6113	AA232700
Sequence 6062	AA187928	Sequence 6114	AA233073
Sequence 6063	AA187998	Sequence 6115	AA233088
Sequence 6064	AA188052	Sequence 6116	AA233131
Sequence 6065	AA188312	Sequence 6117	AA234073
Sequence 6066	AA188396	Sequence 6118	AA234092
Sequence 6067	AA188875	Sequence 6119	AA234990
Sequence 6068	AA189150	Sequence 6120	AA235914
Sequence 6069	AA190529	Sequence 6121	AA236320
Sequence 6070	AA190661	Sequence 6122	AA242891
Sequence 6071	AA190843	Sequence 6123	AA243143
Sequence 6072	AA190890	Sequence 6124	AA243696
Sequence 6073	AA191045	Sequence 6125	AA244003
Sequence 6074	AA191719	Sequence 6126	AA244116
Sequence 6075	AA191721	Sequence 6127	AA244207
Sequence 6076	AA192597	Sequence 6128	AA250748
Sequence 6077	AA194062	Sequence 6129	AA251178
Sequence 6078	AA194988	Sequence 6130	AA251578
Sequence 6079	AA196001	Sequence 6131	AA251644
Sequence 6080	AA196392	Sequence 6132	AA252849
Sequence 6081	AA196978	Sequence 6133	AA253453
Sequence 6082	AA199658	Sequence 6134	AA255761
Sequence 6083	AA203172	Sequence 6135	AA256330

Table 4-1

Sequence 6136	AA257973	Sequence 6188	AA312059
Sequence 6137	AA258357	Sequence 6189	AA312591
Sequence 6138	AA258513	Sequence 6190	AA312756
Sequence 6139	AA261990	Sequence 6191	AA313057
Sequence 6140	AA262513	Sequence 6192	AA313244
Sequence 6141	AA263153	Sequence 6193	AA313653
Sequence 6142	AA278520	Sequence 6194	AA313979
Sequence 6143	AA279517	Sequence 6195	AA314659
Sequence 6144	AA280917	Sequence 6196	AA314810
Sequence 6145	AA284615	Sequence 6197	AA315016
Sequence 6146	AA286953	Sequence 6198	AA316411
Sequence 6147	AA287511	Sequence 6199	AA317068
Sequence 6148	AA291325	Sequence 6200	AA317496
Sequence 6149	AA291363	Sequence 6201	AA317976
Sequence 6150	AA291602	Sequence 6202	AA320004
Sequence 6151	AA291764	Sequence 6203	AA320723
Sequence 6152	AA292638	Sequence 6204	AA322540
Sequence 6153	AA293028	Sequence 6205	AA324478
Sequence 6154	AA293629	Sequence 6206	AA326306
Sequence 6155	AA295182	Sequence 6207	AA327105
Sequence 6156	AA295788	Sequence 6208	AA327469
Sequence 6157	AA296846	Sequence 6209	AA328770
Sequence 6158	AA297941	Sequence 6210	AA329242
Sequence 6159	AA298085	Sequence 6211	AA329770
Sequence 6160	AA298104	Sequence 6212	AA329937
Sequence 6161	AA298294	Sequence 6213	AA330123
Sequence 6162	AA298464	Sequence 6214	AA332083
Sequence 6163	AA298489	Sequence 6215	AA332593
Sequence 6164	AA300065	Sequence 6216	AA332716
Sequence 6165	AA302457	Sequence 6217	AA333090
Sequence 6166	AA305358	Sequence 6218	AA333526
Sequence 6167	AA305627	Sequence 6219	AA333765
Sequence 6168	AA305824	Sequence 6220	AA334344
Sequence 6169	AA305895	Sequence 6221	AA338215
Sequence 6170	AA305909	Sequence 6222	AA340635
Sequence 6171	AA306264	Sequence 6223	AA344625
Sequence 6172	AA306413	Sequence 6224	AA349232
Sequence 6173	AA306480	Sequence 6225	AA351297
Sequence 6174	AA306573	Sequence 6226	AA352938
Sequence 6175	AA306812	Sequence 6227	AA354872
Sequence 6176	AA306956	Sequence 6228	AA358790
Sequence 6177	AA306982	Sequence 6229	AA359838
Sequence 6178	AA306983	Sequence 6230	AA360190
Sequence 6179	AA307513	Sequence 6231	AA360310
Sequence 6180	AA307697	Sequence 6232	AA364171
Sequence 6181	AA308091	Sequence 6233	AA364844
Sequence 6182	AA309909	Sequence 6234	AA365620
Sequence 6183	AA310173	Sequence 6235	AA366995
Sequence 6184	AA310807	Sequence 6236	AA367471
Sequence 6185	AA311028	Sequence 6237	AA370110
Sequence 6186	AA311905	Sequence 6238	AA370222
Sequence 6187	AA311978	Sequence 6239	AA370352

Table 4-1

Sequence 6240	AA370507	Sequence 6292	AA442976
Sequence 6241	AA370620	Sequence 6293	AA443024
Sequence 6242	AA371017	Sequence 6294	AA443082
Sequence 6243	AA371157	Sequence 6295	AA443242
Sequence 6244	AA371265	Sequence 6296	AA444093
Sequence 6245	AA374020	Sequence 6297	AA446298
Sequence 6246	AA374198	Sequence 6298	AA446910
Sequence 6247	AA374814	Sequence 6299	AA447608
Sequence 6248	AA375927	Sequence 6300	AA447948
Sequence 6249	AA376034	Sequence 6301	AA448795
Sequence 6250	AA378933	Sequence 6302	AA448882
Sequence 6251	AA379448	Sequence 6303	AA449520
Sequence 6252	AA397832	Sequence 6304	AA452012
Sequence 6253	AA397953	Sequence 6305	AA452027
Sequence 6254	AA398732	Sequence 6306	AA452352
Sequence 6255	AA399275	Sequence 6307	AA453352
Sequence 6256	AA400696	Sequence 6308	AA453651
Sequence 6257	AA401206	Sequence 6309	AA453719
Sequence 6258	AA402115	Sequence 6310	AA453784
Sequence 6259	AA403120	Sequence 6311	AA454187
Sequence 6260	AA403121	Sequence 6312	AA454962
Sequence 6261	AA403188	Sequence 6313	AA455668
Sequence 6262	AA404444	Sequence 6314	AA455894
Sequence 6263	AA416736	Sequence 6315	AA456390
Sequence 6264	AA417876	Sequence 6316	AA458761
Sequence 6265	AA418628	Sequence 6317	AA458770
Sequence 6266	AA419263	Sequence 6318	AA459167
Sequence 6267	AA419554	Sequence 6319	AA459210
Sequence 6268	AA420571	Sequence 6320	AA461128
Sequence 6269	AA420633	Sequence 6321	AA461467
Sequence 6270	AA420705	Sequence 6322	AA461605
Sequence 6271	AA421682	Sequence 6323	AA464133
Sequence 6272	AA421850	Sequence 6324	AA464141
Sequence 6273	AA422060	Sequence 6325	AA467750
Sequence 6274	AA423801	Sequence 6326	AA468167
Sequence 6275	AA425407	Sequence 6327	AA468404
Sequence 6276	AA425526	Sequence 6328	AA468624
Sequence 6277	AA426578	Sequence 6329	AA468839
Sequence 6278	AA427866	Sequence 6330	AA469129
Sequence 6279	AA428008	Sequence 6331	AA469303
Sequence 6280	AA428084	Sequence 6332	AA469345
Sequence 6281	AA429014	Sequence 6333	AA469406
Sequence 6282	AA429293	Sequence 6334	AA476524
Sequence 6283	AA429493	Sequence 6335	AA476758
Sequence 6284	AA430110	Sequence 6336	AA479167
Sequence 6285	AA431677	Sequence 6337	AA479280
Sequence 6286	AA432103	Sequence 6338	AA479287
Sequence 6287	AA433869	Sequence 6339	AA479646
Sequence 6288	AA433988	Sequence 6340	AA481078
Sequence 6289	AA435565	Sequence 6341	AA481316
Sequence 6290	AA437224	Sequence 6342	AA482539
Sequence 6291	AA442184	Sequence 6343	AA482724

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Sequence 6344	AA483214	Sequence 6396	AA528104
Sequence 6345	AA485928	Sequence 6397	AA528123
Sequence 6346	AA487448	Sequence 6398	AA528202
Sequence 6347	AA487747	Sequence 6399	AA531221
Sequence 6348	AA488633	Sequence 6400	AA531312
Sequence 6349	AA492035	Sequence 6401	AA531509
Sequence 6350	AA492280	Sequence 6402	AA531563
Sequence 6351	AA493222	Sequence 6403	AA531602
Sequence 6352	AA493331	Sequence 6404	AA533057
Sequence 6353	AA493448	Sequence 6405	AA533648
Sequence 6354	AA493512	Sequence 6406	AA534235
Sequence 6355	AA493956	Sequence 6407	AA534281
Sequence 6356	AA494214	Sequence 6408	AA534435
Sequence 6357	AA494493	Sequence 6409	AA535377
Sequence 6358	AA495759	Sequence 6410	AA536036
Sequence 6359	AA496957	Sequence 6411	AA542981
Sequence 6360	AA501363	Sequence 6412	AA548472
Sequence 6361	AA501968	Sequence 6413	AA548722
Sequence 6362	AA502901	Sequence 6414	AA551464
Sequence 6363	AA502979	Sequence 6415	AA552715
Sequence 6364	AA503020	Sequence 6416	AA554661
Sequence 6365	AA504334	Sequence 6417	AA554735
Sequence 6366	AA504953	Sequence 6418	AA557888
Sequence 6367	AA505523	Sequence 6419	AA559906
Sequence 6368	AA505953	Sequence 6420	AA564484
Sequence 6369	AA507442	Sequence 6421	AA564505
Sequence 6370	AA507777	Sequence 6422	AA573742
Sequence 6371	AA508889	Sequence 6423	AA573762
Sequence 6372	AA512974	Sequence 6424	AA575882
Sequence 6373	AA514938	Sequence 6425	AA576425
Sequence 6374	AA515132	Sequence 6426	AA577553
Sequence 6375	AA515143	Sequence 6427	AA578209
Sequence 6376	AA515564	Sequence 6428	AA578511
Sequence 6377	AA516531	Sequence 6429	AA578773
Sequence 6378	AA522936	Sequence 6430	AA578881
Sequence 6379	AA523252	Sequence 6431	AA578976
Sequence 6380	AA523464	Sequence 6432	AA579384
Sequence 6381	AA523498	Sequence 6433	AA579486
Sequence 6382	AA523652	Sequence 6434	AA582591
Sequence 6383	AA523902	Sequence 6435	AA583567
Sequence 6384	AA524485	Sequence 6436	AA583574
Sequence 6385	AA524778	Sequence 6437	AA587140
Sequence 6386	AA525419	Sequence 6438	AA587226
Sequence 6387	AA526515	Sequence 6439	AA587630
Sequence 6388	AA526591	Sequence 6440	AA592908
Sequence 6389	AA526886	Sequence 6441	AA594681
Sequence 6390	AA527187	Sequence 6442	AA594682
Sequence 6391	AA527272	Sequence 6443	AA595471
Sequence 6392	AA527730	Sequence 6444	AA602794
Sequence 6393	AA527737	Sequence 6445	AA602957
Sequence 6394	AA527805	Sequence 6446	AA603041
Sequence 6395	AA528023	Sequence 6447	AA603135

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Sequence 6448	AA604474	Sequence 6500	AA699999
Sequence 6449	AA604497	Sequence 6501	AA702398
Sequence 6450	AA605077	Sequence 6502	AA702888
Sequence 6451	AA609094	Sequence 6503	AA705447
Sequence 6452	AA609436	Sequence 6504	AA705736
Sequence 6453	AA610476	Sequence 6505	AA705743
Sequence 6454	AA613916	Sequence 6506	AA705813
Sequence 6455	AA613933	Sequence 6507	AA706241
Sequence 6456	AA614105	Sequence 6508	AA707490
Sequence 6457	AA614525	Sequence 6509	AA708143
Sequence 6458	AA618484	Sequence 6510	AA708195
Sequence 6459	AA620750	Sequence 6511	AA713687
Sequence 6460	AA620995	Sequence 6512	AA714934
Sequence 6461	AA622344	Sequence 6513	AA716751
Sequence 6462	AA625222	Sequence 6514	AA723130
Sequence 6463	AA625682	Sequence 6515	AA723679
Sequence 6464	AA626439	Sequence 6516	AA724619
Sequence 6465	AA628526	Sequence 6517	AA724868
Sequence 6466	AA629534	Sequence 6518	AA729119
Sequence 6467	AA629608	Sequence 6519	AA732326
Sequence 6468	AA631868	Sequence 6520	AA740261
Sequence 6469	AA631903	Sequence 6521	AA741056
Sequence 6470	AA633794	Sequence 6522	AA742231
Sequence 6471	AA634039	Sequence 6523	AA744367
Sequence 6472	AA634216	Sequence 6524	AA747819
Sequence 6473	AA634379	Sequence 6525	AA764981
Sequence 6474	AA638989	Sequence 6526	AA767323
Sequence 6475	AA639317	Sequence 6527	AA772603
Sequence 6476	AA640105	Sequence 6528	AA773009
Sequence 6477	AA640141	Sequence 6529	AA773362
Sequence 6478	AA641623	Sequence 6530	AA773374
Sequence 6479	AA642471	Sequence 6531	AA775914
Sequence 6480	AA648508	Sequence 6532	AA778038
Sequence 6481	AA649193	Sequence 6533	AA778109
Sequence 6482	AA652846	Sequence 6534	AA778596
Sequence 6483	AA653353	Sequence 6535	AA808003
Sequence 6484	AA654557	Sequence 6536	AA810159
Sequence 6485	AA654675	Sequence 6537	AA812193
Sequence 6486	AA654875	Sequence 6538	AA813266
Sequence 6487	AA659719	Sequence 6539	AA813941
Sequence 6488	AA662658	Sequence 6540	AA814496
Sequence 6489	AA662702	Sequence 6541	AA826649
Sequence 6490	AA662822	Sequence 6542	AA827331
Sequence 6491	AA664480	Sequence 6543	AA831795
Sequence 6492	AA668224	Sequence 6544	AA831876
Sequence 6493	AA668692	Sequence 6545	AA835377
Sequence 6494	AA668951	Sequence 6546	AA836233
Sequence 6495	AA670280	Sequence 6547	AA836488
Sequence 6496	AA675891	Sequence 6548	AA844979
Sequence 6497	AA677282	Sequence 6549	AA845409
Sequence 6498	AA680052	Sequence 6550	AA845442
Sequence 6499	AA682910	Sequence 6551	AA846152

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Sequence 6552	AA846576	Sequence 6604	AI028507
Sequence 6553	AA854071	Sequence 6605	AI028516
Sequence 6554	AA855093	Sequence 6606	AI033912
Sequence 6555	AA862250	Sequence 6607	AI038038
Sequence 6556	AA876668	Sequence 6608	AI038986
Sequence 6557	AA884922	Sequence 6609	AI039271
Sequence 6558	AA884972	Sequence 6610	AI039636
Sequence 6559	AA884992	Sequence 6611	AI040598
Sequence 6560	AA886748	Sequence 6612	AI041497
Sequence 6561	AA886957	Sequence 6613	AI042152
Sequence 6562	AA886998	Sequence 6614	AI050872
Sequence 6563	AA887054	Sequence 6615	AI051210
Sequence 6564	AA889969	Sequence 6616	AI052124
Sequence 6565	AA890326	Sequence 6617	AI052126
Sequence 6566	AA890421	Sequence 6618	AI052724
Sequence 6567	AA896959	Sequence 6619	AI052738
Sequence 6568	AA902127	Sequence 6620	AI053597
Sequence 6569	AA907003	Sequence 6621	AI054023
Sequence 6570	AA909768	Sequence 6622	AI057281
Sequence 6571	AA916753	Sequence 6623	AI057555
Sequence 6572	AA921906	Sequence 6624	AI064691
Sequence 6573	AA923172	Sequence 6625	AI074143
Sequence 6574	AA926926	Sequence 6626	AI074389
Sequence 6575	AA927818	Sequence 6627	AI075893
Sequence 6576	AA934755	Sequence 6628	AI077500
Sequence 6577	AA934851	Sequence 6629	AI079882
Sequence 6578	AA935181	Sequence 6630	AI082272
Sequence 6579	AA935526	Sequence 6631	AI082307
Sequence 6580	AA935560	Sequence 6632	AI082674
Sequence 6581	AA935845	Sequence 6633	AI084100
Sequence 6582	AA937773	Sequence 6634	AI084101
Sequence 6583	AA938717	Sequence 6635	AI088178
Sequence 6584	AA953892	Sequence 6636	AI090786
Sequence 6585	AA961085	Sequence 6637	AI093233
Sequence 6586	AA968756	Sequence 6638	AI094394
Sequence 6587	AA969214	Sequence 6639	AI095250
Sequence 6588	AA972883	Sequence 6640	AI096410
Sequence 6589	AA974621	Sequence 6641	AI123199
Sequence 6590	AA974908	Sequence 6642	AI123672
Sequence 6591	AA975275	Sequence 6643	AI123822
Sequence 6592	AA977871	Sequence 6644	AI125642
Sequence 6593	AA984586	Sequence 6645	AI126257
Sequence 6594	AA988125	Sequence 6646	AI127268
Sequence 6595	AA989049	Sequence 6647	AI127556
Sequence 6596	AA992217	Sequence 6648	AI129800
Sequence 6597	AA992606	Sequence 6649	AI131216
Sequence 6598	AI001862	Sequence 6650	AI133208
Sequence 6599	AI003893	Sequence 6651	AI133690
Sequence 6600	AI015053	Sequence 6652	AI139036
Sequence 6601	AI016162	Sequence 6653	AI142021
Sequence 6602	AI018773	Sequence 6654	AI142095
Sequence 6603	AI022058	Sequence 6655	AI142558



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Sequence 6656 AI146476  
 Sequence 6657 AI148115  
 Sequence 6658 AI148251  
 Sequence 6659 AI148561  
 Sequence 6660 AI148676  
 Sequence 6661 AI167651  
 Sequence 6662 AI174853  
 Sequence 6663 AI174899  
 Sequence 6664 AI184748  
 Sequence 6665 AI189386  
 Sequence 6666 AI189897  
 Sequence 6667 AI190785  
 Sequence 6668 AI198311  
 Sequence 6669 AI198853  
 Sequence 6670 AI198930  
 Sequence 6671 AI198986  
 Sequence 6672 AI199094  
 Sequence 6673 AI199681  
 Sequence 6674 AI200798  
 Sequence 6675 AI200830  
 Sequence 6676 AI201564  
 Sequence 6677 AI203377  
 Sequence 6678 AI204096  
 Sequence 6679 AI206483  
 Sequence 6680 AI206818  
 Sequence 6681 AI207546  
 Sequence 6682 AI207618  
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 Sequence 6684 AI214272  
 Sequence 6685 AI216968  
 Sequence 6686 AI216984  
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 Sequence 6688 AI217172  
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 Sequence 6701 AI267162  
 Sequence 6702 AI267353  
 Sequence 6703 AI267454  
 Sequence 6704 AI267519  
 Sequence 6705 AI267652  
 Sequence 6706 AI267656  
 Sequence 6707 AI267664

Sequence 6708 AI267849  
 Sequence 6709 AI269060  
 Sequence 6710 AI272941  
 Sequence 6711 AI273945  
 Sequence 6712 AI275792  
 Sequence 6713 AI282318  
 Sequence 6714 AI283096  
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 Sequence 6719 AI291296  
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 Sequence 6722 AI302102  
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 Sequence 6731 AI338379  
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 Sequence 6734 AI342409  
 Sequence 6735 AI342468  
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 Sequence 6742 AI357472  
 Sequence 6743 AI358685  
 Sequence 6744 AI360710  
 Sequence 6745 AI361905  
 Sequence 6746 AI361969  
 Sequence 6747 AI365612  
 Sequence 6748 AI376840  
 Sequence 6749 AI380706  
 Sequence 6750 AI380932  
 Sequence 6751 AI382020  
 Sequence 6752 AI382065  
 Sequence 6753 AI382189  
 Sequence 6754 AI383945  
 Sequence 6755 AI400752  
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 Sequence 6757 AI420898  
 Sequence 6758 AI423180  
 Sequence 6759 AI432306

09768927 01401

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Sequence 6760	AI432462	Sequence 6812	AI681405
Sequence 6761	AI433976	Sequence 6813	AI683298
Sequence 6762	AI435153	Sequence 6814	AI684170
Sequence 6763	AI435945	Sequence 6815	AI686139
Sequence 6764	AI440088	Sequence 6816	AI689722
Sequence 6765	AI452485	Sequence 6817	AI693697
Sequence 6766	AI457157	Sequence 6818	AI694087
Sequence 6767	AI467861	Sequence 6819	AI694199
Sequence 6768	AI468347	Sequence 6820	AI694767
Sequence 6769	AI474235	Sequence 6821	AI697470
Sequence 6770	AI475476	Sequence 6822	AI701140
Sequence 6771	AI523940	Sequence 6823	AI703256
Sequence 6772	AI525552	Sequence 6824	AI708172
Sequence 6773	AI525702	Sequence 6825	AI709186
Sequence 6774	AI525843	Sequence 6826	AI718780
Sequence 6775	AI536991	Sequence 6827	AI718825
Sequence 6776	AI553845	Sequence 6828	AI733116
Sequence 6777	AI557112	Sequence 6829	AI734854
Sequence 6778	AI557182	Sequence 6830	AI735314
Sequence 6779	AI557225	Sequence 6831	AI735683
Sequence 6780	AI557237	Sequence 6832	AI739102
Sequence 6781	AI557452	Sequence 6833	AI741354
Sequence 6782	AI557599	Sequence 6834	AI741843
Sequence 6783	AI557639	Sequence 6835	AI742468
Sequence 6784	AI567102	Sequence 6836	AI742912
Sequence 6785	AI569556	Sequence 6837	AI743852
Sequence 6786	AI569819	Sequence 6838	AI744509
Sequence 6787	AI569955	Sequence 6839	AI749547
Sequence 6788	AI570221	Sequence 6840	AI751364
Sequence 6789	AI571418	Sequence 6841	AI751565
Sequence 6790	AI580176	Sequence 6842	AI753664
Sequence 6791	AI590195	Sequence 6843	AI753784
Sequence 6792	AI590351	Sequence 6844	AI754741
Sequence 6793	AI598180	Sequence 6845	AI755085
Sequence 6794	AI610920	Sequence 6846	AI760827
Sequence 6795	AI620111	Sequence 6847	AI761110
Sequence 6796	AI620796	Sequence 6848	AI766123
Sequence 6797	AI623924	Sequence 6849	AI766514
Sequence 6798	AI625201	Sequence 6850	AI768465
Sequence 6799	AI625864	Sequence 6851	AI769392
Sequence 6800	AI631703	Sequence 6852	AI770054
Sequence 6801	AI631745	Sequence 6853	AI791548
Sequence 6802	AI634228	Sequence 6854	AI793062
Sequence 6803	AI635275	Sequence 6855	AI796560
Sequence 6804	AI635681	Sequence 6856	AI799974
Sequence 6805	AI636899	Sequence 6857	AI800048
Sequence 6806	AI648684	Sequence 6858	AI802154
Sequence 6807	AI660606	Sequence 6859	AI805364
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Sequence 6809	AI671180	Sequence 6861	AI815380
Sequence 6810	AI672201	Sequence 6862	AI819014
Sequence 6811	AI672868	Sequence 6863	AI827550

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Sequence 6864	AI828670	Sequence 6916	AL121547
Sequence 6865	AI831047	Sequence 6917	AW003247
Sequence 6866	AI861878	Sequence 6918	AW003692
Sequence 6867	AI879179	Sequence 6919	AW005103
Sequence 6868	AI879995	Sequence 6920	AW008213
Sequence 6869	AI887632	Sequence 6921	AW015683
Sequence 6870	AI888438	Sequence 6922	AW020479
Sequence 6871	AI890240	Sequence 6923	AW022300
Sequence 6872	AI910552	Sequence 6924	AW022756
Sequence 6873	AI912414	Sequence 6925	AW023489
Sequence 6874	AI914128	Sequence 6926	AW051386
Sequence 6875	AI914133	Sequence 6927	AW052140
Sequence 6876	AI921434	Sequence 6928	AW062933
Sequence 6877	AI922855	Sequence 6929	AW067913
Sequence 6878	AI923011	Sequence 6930	AW071063
Sequence 6879	AI923978	Sequence 6931	AW071903
Sequence 6880	AI929509	Sequence 6932	AW080160
Sequence 6881	AI937296	Sequence 6933	AW083804
Sequence 6882	AI940170	Sequence 6934	AW090544
Sequence 6883	AI948503	Sequence 6935	AW104561
Sequence 6884	AI954458	Sequence 6936	AW135430
Sequence 6885	AI961840	Sequence 6937	AW138413
Sequence 6886	AI963623	Sequence 6938	AW151295
Sequence 6887	AI970594	Sequence 6939	AW157047
Sequence 6888	AI972279	Sequence 6940	AW157303
Sequence 6889	AI973109	Sequence 6941	AW160731
Sequence 6890	AI983220	Sequence 6942	AW161491
Sequence 6891	AL035731	Sequence 6943	AW168960
Sequence 6892	AL035985	Sequence 6944	AW169876
Sequence 6893	AL036123	Sequence 6945	AW170485
Sequence 6894	AL036169	Sequence 6946	AW179006
Sequence 6895	AL036483	Sequence 6947	AW183759
Sequence 6896	AL036801	Sequence 6948	C06419
Sequence 6897	AL036988	Sequence 6949	D55192
Sequence 6898	AL037267	Sequence 6950	D58694
Sequence 6899	AL037471	Sequence 6951	F05508
Sequence 6900	AL037800	Sequence 6952	F06621
Sequence 6901	AL039253	Sequence 6953	F06739
Sequence 6902	AL040873	Sequence 6954	F12493
Sequence 6903	AL041050	Sequence 6955	F22763
Sequence 6904	AL041780	Sequence 6956	H00112
Sequence 6905	AL042316	Sequence 6957	H03785
Sequence 6906	AL044447	Sequence 6958	H12527
Sequence 6907	AL044649	Sequence 6959	H13339
Sequence 6908	AL045213	Sequence 6960	H16455
Sequence 6909	AL048699	Sequence 6961	H20086
Sequence 6910	AL049012	Sequence 6962	H20888
Sequence 6911	AL110412	Sequence 6963	H22853
Sequence 6912	AL118621	Sequence 6964	H23837
Sequence 6913	AL119462	Sequence 6965	H39906
Sequence 6914	AL120798	Sequence 6966	H39960
Sequence 6915	AL120840	Sequence 6967	H45550

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Sequence 6968	H50566	Sequence 7020	R89611
Sequence 6969	H57382	Sequence 7021	R93759
Sequence 6970	H59731	Sequence 7022	R98423
Sequence 6971	H59791	Sequence 7023	T05006
Sequence 6972	H70670	Sequence 7024	T05635
Sequence 6973	H75695	Sequence 7025	T10307
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Sequence 6975	H81659	Sequence 7027	T28083
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Sequence 6977	H84729	Sequence 7029	T61421
Sequence 6978	H86010	Sequence 7030	T65998
Sequence 6979	L49115	Sequence 7031	T72376
Sequence 6980	M85423	Sequence 7032	T78948
Sequence 6981	N25145	Sequence 7033	T83709
Sequence 6982	N26359	Sequence 7034	T84943
Sequence 6983	N26421	Sequence 7035	U69559
Sequence 6984	N28384	Sequence 7036	W00556
Sequence 6985	N30486	Sequence 7037	W03170
Sequence 6986	N33567	Sequence 7038	W03471
Sequence 6987	N40852	Sequence 7039	W05472
Sequence 6988	N41386	Sequence 7040	W07109
Sequence 6989	N41827	Sequence 7041	W19899
Sequence 6990	N42196	Sequence 7042	W25222
Sequence 6991	N44001	Sequence 7043	W25970
Sequence 6992	N45940	Sequence 7044	W27440
Sequence 6993	N52271	Sequence 7045	W28596
Sequence 6994	N52554	Sequence 7046	W28729
Sequence 6995	N63991	Sequence 7047	W28994
Sequence 6996	N72922	Sequence 7048	W39249
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Sequence 6998	N90917	Sequence 7050	W45179
Sequence 6999	N98328	Sequence 7051	W45265
Sequence 7000	N98569	Sequence 7052	W51959
Sequence 7001	N98593	Sequence 7053	W56523
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Sequence 7003	R12113	Sequence 7055	W63793
Sequence 7004	R17092	Sequence 7056	W65292
Sequence 7005	R20331	Sequence 7057	W69806
Sequence 7006	R22136	Sequence 7058	W76134
Sequence 7007	R32613	Sequence 7059	W78775
Sequence 7008	R35797	Sequence 7060	W87891
Sequence 7009	R49734	Sequence 7061	W93655
Sequence 7010	R50467	Sequence 7062	W99251
Sequence 7011	R59147	Sequence 7063	Z19471
Sequence 7012	R61601	Sequence 7064	Z30311
Sequence 7013	R69943	Sequence 7065	A06846
Sequence 7014	R70570	Sequence 7066	AB001106
Sequence 7015	R70639	Sequence 7067	AB002357
Sequence 7016	R70995	Sequence 7068	AB002365
Sequence 7017	R71431	Sequence 7069	AB002386
Sequence 7018	R74597	Sequence 7070	AB002387
Sequence 7019	R80852	Sequence 7071	AB002451

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Sequence 7072	AB006077	Sequence 7124	AF000982
Sequence 7073	AB007892	Sequence 7125	AF000984
Sequence 7074	AB007896	Sequence 7126	AF007142
Sequence 7075	AB007931	Sequence 7127	AF007791
Sequence 7076	AB007956	Sequence 7128	AF010233
Sequence 7077	AB011004	Sequence 7129	AF013717
Sequence 7078	AB011079	Sequence 7130	AF013759
Sequence 7079	AB011103	Sequence 7131	AF013988
Sequence 7080	AB011120	Sequence 7132	AF016270
Sequence 7081	AB014486	Sequence 7133	AF017782
Sequence 7082	AB014519	Sequence 7134	AF020038
Sequence 7083	AB014543	Sequence 7135	AF020202
Sequence 7084	AB014548	Sequence 7136	AF020351
Sequence 7085	AB014601	Sequence 7137	AF020797
Sequence 7086	AB015639	Sequence 7138	AF021819
Sequence 7087	AB016068	Sequence 7139	AF022215
Sequence 7088	AB017004	Sequence 7140	AF026939
Sequence 7089	AB018331	Sequence 7141	AF026977
Sequence 7090	AB018346	Sequence 7142	AF027824
Sequence 7091	AB019524	Sequence 7143	AF029689
Sequence 7092	AB019563	Sequence 7144	AF034091
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Sequence 7094	AB019568	Sequence 7146	AF035293
Sequence 7095	AB020637	Sequence 7147	AF035309
Sequence 7096	AB020661	Sequence 7148	AF038451
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Sequence 7101	AB021288	Sequence 7153	AF042386
Sequence 7102	AB021663	Sequence 7154	AF044321
Sequence 7103	AB023145	Sequence 7155	AF044670
Sequence 7104	AB023163	Sequence 7156	AF044671
Sequence 7105	AB023173	Sequence 7157	AF044956
Sequence 7106	AB023205	Sequence 7158	AF045167
Sequence 7107	AB023210	Sequence 7159	AF045229
Sequence 7108	AB023230	Sequence 7160	AF047020
Sequence 7109	AB026190	Sequence 7161	AF049910
Sequence 7110	AB027013	Sequence 7162	AF051323
Sequence 7111	AB028624	Sequence 7163	AF052124
Sequence 7112	AB028981	Sequence 7164	AF052129
Sequence 7113	AB029000	Sequence 7165	AF054186
Sequence 7114	AB029004	Sequence 7166	AF054187
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Sequence 7116	AB032991	Sequence 7168	AF054990
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Sequence 7118	AB033071	Sequence 7170	AF059524
Sequence 7119	AB033079	Sequence 7171	AF060219
Sequence 7120	AB033091	Sequence 7172	AF061258
Sequence 7121	AB033899	Sequence 7173	AF062323
Sequence 7122	AD001528	Sequence 7174	AF065388
Sequence 7123	AF000381	Sequence 7175	AF067171

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Sequence 7176	AF068235	Sequence 7228	AF131758
Sequence 7177	AF070523	Sequence 7229	AF131763
Sequence 7178	AF070539	Sequence 7230	AF131814
Sequence 7179	AF070555	Sequence 7231	AF131838
Sequence 7180	AF070556	Sequence 7232	AF131856
Sequence 7181	AF070561	Sequence 7233	AF132000
Sequence 7182	AF070650	Sequence 7234	AF141968
Sequence 7183	AF070655	Sequence 7235	AF147330
Sequence 7184	AF071202	Sequence 7236	AF147331
Sequence 7185	AF073475	Sequence 7237	AF147339
Sequence 7186	AF075587	Sequence 7238	AF147395
Sequence 7187	AF077030	Sequence 7239	AF151103
Sequence 7188	AF077035	Sequence 7240	AF151109
Sequence 7189	AF077042	Sequence 7241	AF151803
Sequence 7190	AF077202	Sequence 7242	AF151818
Sequence 7191	AF078848	Sequence 7243	AF151840
Sequence 7192	AF078849	Sequence 7244	AF151867
Sequence 7193	AF078854	Sequence 7245	AF151871
Sequence 7194	AF078859	Sequence 7246	AF151878
Sequence 7195	AF078862	Sequence 7247	AF153608
Sequence 7196	AF082657	Sequence 7248	AF155095
Sequence 7197	AF084457	Sequence 7249	AF155110
Sequence 7198	AF084555	Sequence 7250	AF156965
Sequence 7199	AF085355	Sequence 7251	AF159056
Sequence 7200	AF085845	Sequence 7252	AF168956
Sequence 7201	AF086002	Sequence 7253	AF169797
Sequence 7202	AF086003	Sequence 7254	AF170583
Sequence 7203	AF086172	Sequence 7255	AF174605
Sequence 7204	AF086182	Sequence 7256	AF176574
Sequence 7205	AF086183	Sequence 7257	AF179274
Sequence 7206	AF086336	Sequence 7258	AF182289
Sequence 7207	AF086401	Sequence 7259	AF182645
Sequence 7208	AF086431	Sequence 7260	AF188745
Sequence 7209	AF086517	Sequence 7261	AF188746
Sequence 7210	AF086557	Sequence 7262	AF195120
Sequence 7211	AF087999	Sequence 7263	AF201077
Sequence 7212	AF089747	Sequence 7264	AJ002744
Sequence 7213	AF092092	Sequence 7265	AJ004832
Sequence 7214	AF097514	Sequence 7266	AJ005016
Sequence 7215	AF100741	Sequence 7267	AJ010071
Sequence 7216	AF100749	Sequence 7268	AJ011001
Sequence 7217	AF100756	Sequence 7269	AJ223183
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Sequence 7219	AF102265	Sequence 7271	AL021683
Sequence 7220	AF103907	Sequence 7272	AL035304
Sequence 7221	AF109219	Sequence 7273	AL049381
Sequence 7222	AF113131	Sequence 7274	AL049705
Sequence 7223	AF113132	Sequence 7275	AL049932
Sequence 7224	AF124438	Sequence 7276	AL049934
Sequence 7225	AF126780	Sequence 7277	AL049957
Sequence 7226	AF126782	Sequence 7278	AL049969
Sequence 7227	AF129927	Sequence 7279	AL050159

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Sequence 7280	AL050162	Sequence 7332	D50931
Sequence 7281	AL050187	Sequence 7333	D59253
Sequence 7282	AL050198	Sequence 7334	D78275
Sequence 7283	AL050265	Sequence 7335	D79205
Sequence 7284	AL050287	Sequence 7336	D79986
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Sequence 7287	AL080209	Sequence 7339	D84145
Sequence 7288	AL080223	Sequence 7340	D85758
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Sequence 7292	AL110126	Sequence 7344	D87455
Sequence 7293	AL110183	Sequence 7345	D87666
Sequence 7294	AL110185	Sequence 7346	D87735
Sequence 7295	AL117423	Sequence 7347	D87742
Sequence 7296	AL117429	Sequence 7348	D88208
Sequence 7297	AL117446	Sequence 7349	D89053
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Sequence 7301	AL117666	Sequence 7353	E02628
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Sequence 7304	AL133076	Sequence 7356	E07798
Sequence 7305	D00017	Sequence 7357	E08663
Sequence 7306	D12676	Sequence 7358	J02876
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Sequence 7312	D14697	Sequence 7364	J03746
Sequence 7313	D14812	Sequence 7365	J03799
Sequence 7314	D16911	Sequence 7366	J04164
Sequence 7315	D17039	Sequence 7367	J04205
Sequence 7316	D17554	Sequence 7368	J04208
Sequence 7317	D21262	Sequence 7369	J04443
Sequence 7318	D21853	Sequence 7370	J04794
Sequence 7319	D25542	Sequence 7371	K01911
Sequence 7320	D26598	Sequence 7372	K03515
Sequence 7321	D28476	Sequence 7373	L00635
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Sequence 7323	D29954	Sequence 7375	L04636
Sequence 7324	D30655	Sequence 7376	L05093
Sequence 7325	D31883	Sequence 7377	L05779
Sequence 7326	D37931	Sequence 7378	L08441
Sequence 7327	D38293	Sequence 7379	L09159
Sequence 7328	D38441	Sequence 7380	L10320
Sequence 7329	D38583	Sequence 7381	L10678
Sequence 7330	D42047	Sequence 7382	L16558
Sequence 7331	D43950	Sequence 7383	L19597

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Sequence 7384 L19605  
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 Sequence 7386 L20941  
 Sequence 7387 L26081  
 Sequence 7388 L33404  
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 Sequence 7390 L38486  
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 Sequence 7452 S70290  
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 Sequence 7457 U03886  
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 Sequence 7476 U32944  
 Sequence 7477 U33821  
 Sequence 7478 U34252  
 Sequence 7479 U36764  
 Sequence 7480 U37143  
 Sequence 7481 U37230  
 Sequence 7482 U37689  
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 Sequence 7484 U39400  
 Sequence 7485 U40272  
 Sequence 7486 U40763  
 Sequence 7487 U47742



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Sequence 7488	U54558	Sequence 7540	X74802
Sequence 7489	U58855	Sequence 7541	X74801
Sequence 7490	U59435	Sequence 7542	X75593
Sequence 7491	U61083	Sequence 7543	X75861
Sequence 7492	U65090	Sequence 7544	X76538
Sequence 7493	U69645	Sequence 7545	X79535
Sequence 7494	U70730	Sequence 7546	X80754
Sequence 7495	U79260	Sequence 7547	X80910
Sequence 7496	U79278	Sequence 7548	X80916
Sequence 7497	U80034	Sequence 7549	X81789
Sequence 7498	U80669	Sequence 7550	X81889
Sequence 7499	U83115	Sequence 7551	X81900
Sequence 7500	U85658	Sequence 7552	X83973
Sequence 7501	U89436	Sequence 7553	X84908
Sequence 7502	U90904	Sequence 7554	X85129
Sequence 7503	U96759	Sequence 7555	X85372
Sequence 7504	U96915	Sequence 7556	X87176
Sequence 7505	U97519	Sequence 7557	X93036
Sequence 7506	V00594	Sequence 7558	X94323
Sequence 7507	X01630	Sequence 7559	X97065
Sequence 7508	X01742	Sequence 7560	X98743
Sequence 7509	X02530	Sequence 7561	Y00281
Sequence 7510	X02761	Sequence 7562	Y00282
Sequence 7511	X04098	Sequence 7563	Y00503
Sequence 7512	X04470	Sequence 7564	Y08319
Sequence 7513	X05332	Sequence 7565	Y10313
Sequence 7514	X06617	Sequence 7566	Y13286
Sequence 7515	X07819	Sequence 7567	Z11241
Sequence 7516	X12597	Sequence 7568	Z14244
Sequence 7517	X12791	Sequence 7569	Z18538
Sequence 7518	X15187	Sequence 7570	Z26317
Sequence 7519	X15729	Sequence 7571	Z29330
Sequence 7520	X15759	Sequence 7572	Z47087
Sequence 7521	X52174	Sequence 7573	Z74615
Sequence 7522	X53605	Sequence 7574	N91258
Sequence 7523	X55654	Sequence 7575	N91825
Sequence 7524	X56999	Sequence 7576	N92483
Sequence 7525	X57352	Sequence 7577	Q13363
Sequence 7526	X57766	Sequence 7578	Q46089
Sequence 7527	X57812	Sequence 7579	Q65520
Sequence 7528	X59406	Sequence 7580	Q65676
Sequence 7529	X59834	Sequence 7581	Q75166
Sequence 7530	X59841	Sequence 7582	Q94780
Sequence 7531	X63432	Sequence 7583	T59274
Sequence 7532	X64330	Sequence 7584	V03517
Sequence 7533	X65644	Sequence 7585	V29653
Sequence 7534	X66276	Sequence 7586	V32447
Sequence 7535	X67698	Sequence 7587	V33197
Sequence 7536	X69117	Sequence 7588	V34263
Sequence 7537	X70326	Sequence 7589	V34271
Sequence 7538	X73114	Sequence 7590	V43612
Sequence 7539	X73608	Sequence 7591	V58360

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Sequence 7592	V58628	Sequence 7644	AL03908
Sequence 7593	V58648	Sequence 7645	AL022097
Sequence 7594	V58684	Sequence 7646	AL031346
Sequence 7595	V62427	Sequence 7647	AL034555
Sequence 7596	V62428	Sequence 7648	AL079338
Sequence 7597	V62430	Sequence 7649	AP000527
Sequence 7598	V70354	Sequence 7650	S65371
Sequence 7599	V70355	Sequence 7651	U15177
Sequence 7600	V87930	Sequence 7652	Z83843
Sequence 7601	X03841	Sequence 7653	Z93020
Sequence 7602	X04316		
Sequence 7603	X24060		
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Sequence 7606	X37486		
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Sequence 7608	X39868		
Sequence 7609	X40372		
Sequence 7610	X51668		
Sequence 7611	X52235		
Sequence 7612	X59352		
Sequence 7613	X91484		
Sequence 7614	Z13088		
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Sequence 7619	Z27252		
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Sequence 7636	AC004456		
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Sequence 7638	AC005004		
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Sequence 7640	AC006057		
Sequence 7641	AC006257		
Sequence 7642	AC006285		
Sequence 7643	AF064859		

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Sequence 1949: found in patent publication W099/46374

CCCTTAGCGTGGTCGCGGCCGAGGTACTTGGTGGACCACCATCACACCCTCCTGTGCAAT  
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Sequence 1950: found in patent publication W099/64576

GATATCTGCAGAATTCGCCCTTAGCGTGGTCGCGGCCGAGGTACATAAAGCAGATTCAAG  
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Sequence 1951: found in patent publication W099/64594

CCCTTAGCGTGGTCGCGGCCGAGGTACCTCATTAGTAATTGTTTTGTTGTTTCATTTTTT  
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AAATCAATACCTCTTACCTTCTNTTGCATGCAAAGATCTTAAAGGATTGTCAAACCTTCA  
AAACGTTACAAGNAGAACCNNCCANNAAGGTCTATAAAATGCCAGTAAGTGACCCCTNT  
CAAGCTGTCAAGGCTTTTAAATAGGANTTTGGGGATTAAATGCTTTGTNTTTTTTAA  
AGGGAAANAAATAAGAGTTGCTNNNTTTTAAAAAATGCAATGTTTTTTANCCAATTAAA  
AATTTNCCCCAACTTTTTTAAAAAGNAAANAAAAANACCNCTTTTGGGAGANCGGNA  
AAAAAAAAAAAA

Sequence 1952: found in patent publication W099/54461

CCCTTAGCGTGGTCGCGGCCGAGGTACAAGATGTGCATGCAGTCCAAGGCCATGAACGAG  
GCATCCACGGCCAGCTGGGCATGCTGGTGTTCAGGCACGAGATAGAGGCTCACCTTCGC  
AAACAGAAGCAGAAGACAAGTAGCAAAAAACATGAACTCCAGAGAAGGATTGTGGGAG  
ACACTTTTTCTTTCTTTTGCAATTACTGAAAGTGGCTGCAACAGAGAAAAGACTTCCAT  
AAAGGACGACAAAAGAATTGGACTGATGGGTGAGAGATGAGAAAGCCTCCGATTCTCTC  
TGTTGGGCTTTTTACAACAGAAATCAAATCTCCGCTTTGCTGCAAAAGTAACCCAGTT  
GCACCCTGTGAAGTGTCTGACAAAGGCAGAATGCTTGTGAGATTATAAGCCTAATGGTGT  
GGAGGTTTTGATGGTGTTTACAATACACTNAGACCTGATGGTTTTGTGNGCTCATTGAA  
AATATTCATGAATTTAAAGAGCAGTTTTTGGTNA

Sequence 1953: found in patent publication W099/64594

CCCTTAGCGTGGTCGCGGCCGAGGTACTCTTTCTCTCCCTCCTCTGAATTTAATTCTTT  
CAACTTGCAATTTGCAAGGATTACACATTTCACTGTGATGTATATTGTGTTGCAAAAAA  
AAAAGTGTCTTTGTTTAAATTAATTGTTTGTGAATCCATCTTGCTTTTCCCATTG  
GAACTAGTCATTAACCCATCTCTGAACTGGTAGAAAAACATCTGAAGAGCTAGTCTATCA  
GCATCTGACAGATGAAATTGGATGGTTCTCAGAACCATTTACCCAGACAGCCTGTTTCT  
ATCCTGTTTAATAAATTAATTTTTGGGGTCTCTACCATGCCATAGCAAAACCCCTGC  
TTCCAAATTCTTGTCAACAATTAATAAGTCTGNTGGACCTTGGAAGTTT

Sequence 1954: found in patent publication W099/40189

TTTTCCNTTTTTTTTTTTTTTTTTTTTTTTTTTTTCCCNCCAAGCTTTATCTAGNCTTAGACT  
TTTTAAAAAGTTTGGGGGAGATTCTGAATTGGCTAAAAGACATGCATTTTTAAACTA  
GCAACTCTTATTTCTTTCTTTTAAAAATACATAGCATTAAATCCCAATCCTATTTAAAG

Table 4-2

ACCTGACAGCTTGAGAAGGTCACCTACTGCATTTATAGGACCTTCTGGTGGTTCTGCTGTT  
ACGTTTGAAGTCTGACAATCCTTGAGAATCTTTGCATGCAGAGGAGGNAAGAGGTATTGG  
ATTTTCACAGAGGAAGAACACAGCGCAGAATGAAGGGCCAGGCTTACTGAGCTGNCCAGT  
GGAGGGCTCATGGGNGGGACATGGAAAAGAAGGCAGCCTAGGCCCTGGGGAGCCCAGTCC  
ACTGAGCAAGCAAGGGACTGAGTGAGCCTTTTGCAGGAAAGGGCTAANAAAAAGGNAAAC  
CATTCTAAACACANCAAGAAACTGGCCAAATGCTTTGGGAAGTGGGGTTATTGGCCNAT  
AATGGGGCCCCAA

Sequence 1955:found in patent publication W099/64594

CCCTTTCGAGCGGCCGCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCCGCCT  
CCCCAAAGCTTTATTNTNTTGANTTTTTAAAAAGTTTGGGGGCANATTCTGAATTGGC  
TAAANACATGCATTTTAAAACTAGCAACTNTTATTNTTTCCTTTAAAAATACATAGC  
ATTAAATCCCAAATCCTATTAAAGACCTGACAGNTTGANAAGGTCACTACTGCATTTAT  
AGGACCTTCTGGNGGTTCTGCTGTTACGTTTGAAGTCTGACAATCCTTGANAATNTTTCG  
ATGCANAGGAGGTAANAGGTATTGGATTTTACAGAGGAAGAACACAGCGCANAATGAAG  
GGCCAGGCTTACTGAGCTGTCCAGTGGAGGGCTCATGGGTGGGACATGGAAAANAAGGCA  
GCCTAGGCCCTGGGGAGCCCAGTCCACTGAGCAAGCAAGGGACTGANTGAGCCTTTTGCA  
GGAAANGGCTAANAAAAAGGAAAACCATTCTAAACCCCAACANGAACTGTCCAAATGCT  
TTGGGAAGTGGGTTTATTGCCTATAAAGGGTCCCCAAA

Sequence 1956:found in patent publication W099/64594

CTCGAGCCGGCTCGCCAGTGTGATGGGATATCTGCAGAATTCGCCCTTAGCCGTGGTCGC  
GGCCCGATGTA

Sequence 1957:found in patent publication W099/64594

CCCTTAGCGTGGTCGCGGCCGAGGTACCTAGAAAACAGAACTTGAGTAGACATGGTAAT  
GACCAGAAAAGGCTATCTTTATACATTTCTTTTGCTACGCTTCAAATTCATGTCACCTAA  
AAGTTGTGAAGTGCACAAAACAAATCTACTTAACTGAAAATTATTTTCAATGAATGGGAT  
GTTTAGAAGTCTGTGAGGGTTTAAAGGTCTTTTCGAATAGCAAATCTAATGAGGCTTT  
TTTAAAGTTGGCAATTTAAACTCATACAAGAAATAAAAACTCACCAGTGTGGCTGGGCAGA  
ATATATATATTTTCTCAAATATTGTTTGTGTTTTTCCCTGCACTGTATCCATGGTCC  
CATGATGAACTGTTATATTGCTGATATATTTATTGGAATATGTGGGCCAACTTCCTTTC  
CACTCAACATATGGATTGGTAGTTTTAAATAATTCCTTCTATTAAGCAAATGTGTGGCT  
AAGGCACATTTAAATAGCCCATTAACCAATGGAGATGACAATGTGTTACCCTCAGAGAA  
AGCTTAATTTTT

Sequence 1958:found in patent publication W099/64594

CCCTTTCGAGCGGCCGCCGGGCAGGTACTATATGGACACCAGCATGGAGCAGAAAATGA  
GGGCAGCAGTGTCCAATCTCATTCCAGGTGAGAAGTTGCACAGTGTCCAATAGGTGCATA  
CATCTCCTTAGTAAGTAGTTGTGATTAACAATGAAATAGAAATGAAAATATATTTTTTT  
ATTTATGTGATTATATTTTTTCAGGCAGCTAATAAGTTGGTAGGACATAATATTTAATTC  
GTTGGGGACCTAATTATTTATAAATTGAATGGTTAGATATTTCTTTTGGCCTAAGCCACC  
ATGAAAAAATCACTGAGGCGCTAAGGGAACATGAACCTAAGAACCCCTTCTGAGTCTCTG  
TTTCTCAACTGTAGATGAAGAACCTGCTCCACCTTCTCTTTCGATTGTGCAACGGC  
AGTTGAGATACTGCGCCAGAATGGACCCTATTGATGGCCTAC

Sequence 1959:found in patent publication W099/63088

CCCTTTCGAGCGGCCGCCGGGCAGGTACCTCATTAGTAATTGTTTTGTTGTTTCATTTT  
TTTCTAATGTCTCCCCCTCTACCAGCTCACCTGAGATAACAGAATGAAAATGGAAGGACAG  
CCAGATTTCTCCTTTGCTCTCTGCTCATTCTCTCTGAAGTCTAGGTTACCCATTTTGGGG  
ACCCATTATAGGCAATAAACACAGTTCCCAAAGCATTGGACAGTTTCTTGTTGTGTTTT  
AGAATGGTTTTCCTTTTTCTTAGCCTTTTCTGCAAAGGCTCACTCAGTCCCTTGCTTG  
CTCAAGTGGACTGGGCTCCCCAGGGCCTAGGCTGCCTTCTTTTCCATGTCCACCCATGAG  
CCCTCCACTGGACAAGCTCAGTAAGCCTGGCCCTTCATTCTGCGCTGNGTTCTTCTCTGT  
GAAAATCCAATACCTCTTACCTTCTCTGCATGCAAAGATTCTCAAGGATTGCAGACTTCA  
AACGTAACAGCAGAACCACCAGAAGGTCTATAAATGCAGTAGTGACCTTTTCAAGCTGT  
CAGGCCTTTAAATANGAATTGGGAATTTAATGCTATGTATTTTNAAGGAAAGAAATA  
AGAAGTTGCTTAGNTTTNAAAATGCATGTCTTTTANCCCAATTAATAAATTTGCCCCAAA  
CTT

Sequence 1960:found in patent publication W099/64594

NGATATCTGCANAATTCGCCCTTTCGAGCGGCCGCCGGGCAGGTACAACCTTTTTAAATA  
GGGAATATGATAGCTTNGCATGGTGGTGTGCACCTATAGCCCCCACTGCCTGGAAAGCTG

Table 4-2

GGGTGGGAGAATCGCTTGAGTCCAGGAGTTTGAGGTTACAGTGATCCACGATCNGCCAC  
TACTCTCCAGCCTGGGCANAGAGCAAGACCTGTNTCAAAGCATAAAATGGAATNACAT  
ATCAAAATGAAACANGGAAAATGAAGCTGA

Sequence 1961:found in patent publication W099/64584

CCCTTTCGAGCGGCCCGCCCGGGCAGGTACCTTTTTTTTTTTTTTTTTTTTTTCCGTCTCCC  
CAAAGCTTTATCTGTCTTGACTTTTTAAAAAGTTNGGGGGCANATTNTGAATTGGNTAA  
AAGACATGCATTTTTAAACTAGCAACTCTTATTTCTTTCCTTTAAAAATACATAGCATT  
AAATCCCAAATCCT

Sequence 1962:found in patent publication W099/64594

GCATGCTCGAGCCGCGCCAGTGTGATGGGATATCTGCAGAATTCGCCCTTTCGAGCGG  
CCCGCCCGG

Sequence 1963:found in patent publication W099/64594

CCCTTTCGAGCGGCCCGCCCGGGCAGGTACAAGCTATCTTTTGCTCCAAAACAGTTCTGAA  
GGTTTTATTTATATTTTATCTTATCCCGAGGGACCAACAGCAGGCATACCTTTGCCAGGC  
CTTCTTGAGAAAGACACAGAGCCGTAAAGGCCAAAAATAAAATTGCAATAAAGTATATGG  
TATTGGGGGACAGGAGAACCAGAAACCTCAAAGAGAACCAATTTGTAGCACGTTCTTTT  
TTAAGGCTCTACCCCTGTAGAAGTAAGAACTAGCCTGCCTTTTTAGCCATATGAGAGTT  
TCCTCCAGAGCCATCTTCCAAAGTAGCAGACTTGCCCAAGTTGCCCAATGCCAAATAAGT  
GAGTTGGAAGTTCGTTTGCTTCAAACACACTGCACTTAGAAACCAGACTTGAAATAATCG  
AAGCCCCACAGAAAAGCTTCATGAAACGAAGTGTTACTTTCCTAGAGAATAAGAAAGTCA  
CAAGATTGAGGAGTCTGTTCTAAAGTTCT

Sequence 1964:found in patent publication W099/64594

CCCTTTCGAGCGGCCCGCCCGGGCAGGTACCTCATTAGTAATTGTTTTGTTGTTTCATTTT  
TTTCTAATGTCTCCCTCTACCAGCTCACCTGAGATAACAGAATGAAAATGGAAGGACAG  
CCAGATTTCTCCTTTGCTCTCTGATCATTCTCTGAGTCTAGGTTACCCATTTTGGGG  
ACCCATTATAGGCAATAAACACAGTTCCCAAAGCATTGGACAGTTTCTTGTGTGTTTT  
AGAATGGTTTTCTTTTTCTTAGCCTTTTCTGCAAAAGGCTCACTCAGTCCCTTGCTTG  
CTCAGTGGACTGGGCTCCCCAGGGCCTAGGCTGCCTTCTTTTCCATGTCCACCCATGAGC  
CCTCCACTGGACAAGCTCAGTAAGCCTGGCCCTTCATTCTGCGCTGTGTTCTTCTCTGT  
GAAAATCCAATACCTCTTACCTCCTCTGCATGCAAAGATTCTCAAGGACTGGCAGACTTC  
AAACGTAACAGCAGAACACCAGAAAGGCCATAAATGCAGTAGTGACCTTCTCAAGCTG  
CANGTCTTTAAATAGGATTTGGGAATTAATGCTATGTANTTTTAAANGGAAAGAAATAAG  
AAGTTGCTAGTTTTTAAAAATGCATGTTTTTAAGCCAATTCAAAAATTGGCCCCAACTTTT  
TTTAAAAAGTCAAGACAAGATAAAGCNTTTGGGGAGAACGGAAAAA

Sequence 3723:found in patent application W099/57132

CCCTTAGCGTGGTTCGCGGCCGAGGTACTCATGTATTTTTTTTTTCCAGATCTCTTTCCCC  
AAGTTGCTATTGTAAGAGTATTCTGCTGCGTGTGGATGCAGTTATACACATTAAAGCAGA  
TCTGGAGTCTGAAGTAGCTATAAAGCAGCTATAAAACAGAAATACATGCATAGCTGCAGA  
AACCATGATAGGTAGAGGACTTTTCTTTGGTTTTGTTTTGTTTTGTTTTGTTTTGTTTT  
TGGTTTTTACAGAGAAGAGTTTTTATTCAAAGAAAAAATTCAGTGAAATTGTGCACAAA  
TGCTGGTTTTTACACCATCTTAAAGAAAAAATTTACAAGGGGTGTTTTGGAGTANAAAAA  
AGGTTATAAAGTTGGAATCTTAAATTGTNAAATTAACCATTGAGTGTCAAGGNTCTAAAA  
GCAGAACTTATTTTGTGCAATGAACATAANGAAAGACTACTGTATAGGGTTTTTTTTT

Sequence 3724:found in patent application W099/64594

CCCTTTCGAGCGGCCCGCCCGGGCAGGTACTCAGACAAATACAACGTGCCCATTTTCGTCAG  
ATATTGCGCAGAACCAAGAATTTTATAAGAACGCAGAAAGTTAGACCACCATTTACCGTAT  
GCATNTTTAATTAAGGCAGGCCATTCTCGAATCTCCAGAAAAGCAGCTAACACTAAATGA  
GATCTATAACTGGTTTACACGAATGTTTGCTTACTTCCGACGCAACGCGGCCACGTGGAA  
GAATGCAGTGCCTCATAATCTTAGTCTTCAAAAGTGTGTTGTGGCGAGTAGAAAACGTTA  
AAGGGGGCAGTATGGGACAGTGGATTGAAGTANGAATTCAAAAACGAAGGGCCCCAAAAA  
GGATCAGTGGGTAACCTTT

Sequence 3725:found in patent application W099/64594

NTNTTAGCGTGGTTCGCGGCCGAGGTACTTTTTGCTTTANAGATAGATAGGGCATCCAAT  
ACAACGAAACAACCTGATAACAAATTAATTTTATTTTCAATAAAAAGGAATGCTCTGG  
TTTTTAACTGGCTCCTTGAGGAAGCCAGAAGATGGCATCTGCTCTTTAAACAGGCTTCT  
CTTATCTGATTTGAGACACAAATCCACCAAGNATTCTTTTACAGTGGAAGTAGGCACC  
ACCCCTCAGATCACGAGGCCCTAGGNAAGAAGCCTGTGGGAAATCAGCCCTGTGATGTT



Table 4-2

GAACCGGGGTTATTGGCCATAAATGGGNCCCCAAATGGGTAANCCAACTTTAAAAAAN  
ATGANCCGAAANCAAAGGGNAAAATCTGGGTGGCCCTTCCATTTNATTNTNGTANNNCAA  
AGGGAACCTGGNNNAAGGGGGGNCCTTTTNAAAAAA

Sequence 3732:found in patent application W099/64594

CCCTTAGCGTGGTCGCGGCCCGAGGTACTTTTTTTTTTTTTTTTTTTTTTCCCGCCTC  
CCCAAAGCTTTATCTGTCTTGACTTTTTAAAAAAGTTTGGGGGCAGATTCTGAATTGGCT  
AAAAGACATGCATTTTAAAACTAGCAGCTCTTATTTCTTTCTTTAAAAATACATAGCA  
TTAAATCCCAAATCCTATTTAAAGACCTGACAGCTTGAGAAGGTCACTACTGCATTTATA  
GGACCTTCTGGTGGCTCTGCTGTTACGTTTGAAGTCTGACAATCCTTGAGAATCTTTGCA  
TGCAGAGGAGGTAAGAGGTATTGGATTTTACAGAGGAAGAACACAGCGCANAATGAAGG  
GCCAGGCTTACTGAGCTNTCCAGTGGAGGGCTCATGGGTGGGACATGGAAAANAAGGCAG  
CCTANGCCCTGGGGAGCCANTCCACTGAGCAAGCAAGGGACTGANTGAGCCTTTTGCAG  
GAAAAGGCTTAAAAAAGGAAAACCATTCTAAAACACAACAAGGAACTGTCCAAATGCT  
TTGGGAACTGGGTTTATTTGCCTATTATGGGGTCCCCAAAA

Sequence 3733:found in patent application W098/39448

CCCTTAGCGTGGTCGCGGCCGAGGTACTACAAAACAGAATAATTTTGAAGTTTTAGAAT  
AAATGTAATATATTTACTATAATTCTAAATGTTTAAATGCTTTTCTAAAAATGCAAACT  
ATGATGTTTAGTTGCTTTATTTTACCTCTATGTGATTATTTTCTTAATTGTTATTTTTT  
ATAATCATTATTTTCTGAACCATCTTCTGGCCTCAGAAGTAGGACTGAATTCTACTAT  
TGCTAGGTGTGAGAAAGTGGTGGTGAGAACCTTAGAGCAGTGGAGATTGCTACCTGGTC  
TGTGTTTTGAGAAAGTCCCCCTTAGAAAGTTAAAGAATGTAGAAAAGATACTCAGTCTTA  
ATCCTATGCAAAAAAATAAAGTAATGTTTTCTATGAGGAAAATAACCATGAGCTG  
TATCATGCTACTTAGCTTTTATGTAAATATTTCTTATGTCTCCTCTATTAAGAGTATTTA  
AAATCATATTTAAATATGAATCTATTCTATGCTAACATTATTTTCAAAACATACATGGAA  
ATTTAACCCAATTGTCTCATATAAGGTTTTATTTGAATTG

Sequence 4144:found in patent application W099/64594

CCCTTTCGGCGGCCCGCCCGGGCAGGTACCTGGGGTCTCAGGGTTGCTCTGGGCCTGATC  
ATCCACTCAGATCTGTAAGGAGGATTGTCAGGATCCATTTAGAAAGATCCTCCCTTACTT  
CCACAAGCATGGCCTTTGGCTCTTAAATACCTGTGCTGGGGTTTTGTAATTATAGAAACA  
ACAGGAACCAAACTCATTAATGTTGAGCTACAAACCAGAGGGAAGCTTCTTTCTCAAAA  
CAGGGCTCAGGCCTAGAAAAATCTAGTTTTCTGAAATCGCTAGCCAGCAACAGCACTGAG  
ATGGCCATCCCAGAAACAAGGCCAACACAGAAGCACCCATAAAGGCCGCTGGAGGTTGGG  
ACAAAGAGATCCTTGCTGTCTTACAGACCCCCTGACTTCCAAGGAGCTCCCCCTCTTACC  
CAGCCTGGCCTGCCTTCTCCACAGGGTAGCTGATCGTCAGCATCATCTTCAATGGTGTG  
CCAAAAGCACTCAANTGCTCCTGCCATCCCTGTCCATCTTCAACATGAAAAGGAGAGGTT  
AGCACTTCAACCTGGGCGACTGAGCAAGANTTCATCTTAAAAAATAAAAAAATT

Sequence 4145:found in Patent application W099/64594

CCCTTAGCGTGGTCGCGGCCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTACC  
GGCTCCCCAAAGCTTTATCTGTCTTGACTTTTTAAAAAAGTTTGGGGGCANATTCTGAAT  
TGGCTAAAAGACATGCATTTTAAAACTAGCAACTCTTATTTCTTTCTTTAAAAATACA  
TAGCATTAATCCCAAATCCTATTTAAAG

Sequence 4146:found in Patent application W099/64594

ATCTGCAGAATTCGCCCTTANCGTGGTCGCGGCCGAGGTACTTTTT

Sequence 4147:found Patent application W099/63088

CCCTTAGCGTGGTCGCGGCCCGAGGNACCATGATATCATGTATCCTGCTTGGACATTNTG  
GGAAAGGGGGACCAGCTGGTTGGCCAATTTATCCTACAGGTCTTGGACGNGGGACCTCT  
TCAAAAGAAGATCTGGTAAGGGCAAGCAGCACAAAGTGGCCATGGAAAAAGAAAACTCTA  
CANNATATTTCCGAGGATCAAGGACAAGTCCAAAACGAGATCCTCTCATTCTTCTGTCTC  
GGAAAAACCCAAACTTGTGTTGATGCAGAATACACCAAAAACAGCCTGGAAATCTATGA  
AAGATCCTTAGGAAANGCCAGCTGCTAAGGATGTCCATCTTGTGGATCACTGCAAAATACA  
AGTATCTGTTTAAATTTTCGAGGCGTAACTGCAAGTTTCCGGTTAAACACCTCTTCCTGT  
GTGGCTCACTTGGTTTCCATGTTNGGTGATGAAGTGGCTAGAATTCTTCTATCCACAGCT  
TGAAGCCTGGGTTCACTATATTCCAAGTCAAAACAGATCTCTTCAATGTCCAANAGCTG  
TTACAATTTTGAAAAACCAATGATGATGTAACCTCAAGAAAATTGCTTGAAAGGGGGAA  
G

Sequence 4148:found Patent application W099/64594

CCCTTAGCGTGGTCGCGGCCGAGGTACCACAAAACAGAATAATTTTGAAGTTTTAGAAT

Table 4-2

AAATGTAATATATTTACTATAATTCTAAATGTTTAAATGCTTTTCTAAAAATGCAAACT  
ATGATGTTTAGTTGCTTTATTTTACCTCTATGTGATTATTTTCTTAATTGTTATTTTTT  
ATAATCATTATTTTTCTGAACCATTTCTTCTGGCCTCAGAAGTAGGACTGAATTCTACTAT  
TGCTAGGTGTGAGAAAGTGGTGGTGAACCTTAGAGCAGTGGAGATTGCTACCTGGTC  
TGTGTTTGAAGTGCCCTTAGAAAGTTAAAGAATGTAGAAAAGATCTCAGTCTTAA  
TCCTATGCAAAAAAATCAAGTAATTGTTTCTATGAGGAAAATAACCATGAGCTG  
TATCATGCTACTTAGCTTTTATGTAATATTTCTTATGNCTCCTCTATTAAGAAGTATTT  
AAAATCATATTTAAATATGAATCTATTTCATGCTAACATTATTTTCAAAACATACCTGGAA  
ATTAACCCAGAATGGCTACATATAAGGGTT

Sequence 4149:found Patent application W099/64594

CCCTTTTCGAGCGGCCCGCCGGGAGGTACCTCATTAGTAATTGTTTTGTTGCTTCATTTT  
TTTCTAATGTCTCCCTCTACCAGCTCACCTGAGATAACAGAATGAAAATGGAAGGACAG  
CCAGATTTCTCCTTTGCTCTCTGCTCATTCTCTCTGAAGTCTAGGTTACCCATTTTGGGG  
ACCCATTATAGGCAATAAACACAGTTCCCAAAGCATTGAGACAGTTTCTTGTGTGTTTT  
AGAATGGTTTTCTTTTTCTTAGCTTTTTCTGCAAAAGGCTCACTCAAGTCCCTTGCTT  
GCTCAGTGGACTGGGCTCCCCAGGGCCTAGGCTGCCTTCTTTTCCATGTCCCACCCATGA  
GCCCTCCACTGGACAGCTCAGTAAGCCTGACCCTTCACTTCTGCGCTGTGTTCTTCTCTG  
TGAAATCCAATACCTCTTACCTCCTCTGCATGCAAAGATTCTCAAGGATTGTCAGACTT  
CAAACGNGACAGCAGAACCACCAGAAGGTCCTATAAATGCAGTAAGTGACCTTCTCAAGC  
TGTCAGGTCTTTAAATAGGATTTGGGATTTAATGCTATGTATTTTAAAGGAAAGAAATA  
AGAAGTTGCTAGTTTTAAAAATGCATGTCTTTTAGCCAATTTAGAATCTGGCCCCAACT  
TTTTTAAAGTCAAAGACAGATAAAGCTTTNGGGAGACGGAAAAAAAAAAAAAAAAAAAA  
AAGT

Sequence 4150:found Patent application W099/64594

CGCCAGTGTGATGGGATATCTGCAGAATTGCGCCTTTTCGCGGCCGCGGGG

Sequence 4151:found Patent application W099/64576

CCCTTTTCGAGCGGCCCGCCGGGAGGTACAGTCATCCCACTACCTGGCTATTTCACTACT  
TGGTGTCTAGACAAGCTCCAAGAACTGACTGGATCTTGGCTTGCTCTGTTTCTGTCACT  
GCTAATATAATATGGAAAACATTGCTGAAAAGAACAGAGATGGCCATGGATATGGCTAGG  
TTAGGTATTATATCCAAATATCTGAACTCTAACCTAATGTGGATATGATTCTGTAGCAT  
TATATTAAGCTATGATGATGCAATGCAGGAAATAACCTTTCACTCTCCCCCTAGAGG  
ATCACGACAGGTGCTTTCAATGCCTGCCTTATCTATGGGACAAGTAGTGTGATTCTTCAA  
GTGAGAAGTGAAAGCCTTTGGGGGATTTGAGTCANGAAGGGGAACATGGCTAAATTGCCT  
GGAACTCTGCCAACAAAGTCTGCGGGTAGATTCTACTTGTCTCTGGGATAAAAAAATCTG  
TGCTCAATGAACTTATTGTGTTTGGAAAA

Sequence 4152:found Patent application W099/64594

TGCTCGAGCCGCGCCGAGTGCGANGGATATCNGCACAATTCCCCCTTTCAAGCGGCC

Sequence 5614:found in patent application W099/46375

CCGCGGTGGCGGCCGAGGTACCACAAGATATTATGCATGCTCCAATCGAGCAAAATGTCC  
ATCATAACAAATATAAAATGTTCCAGAAAGTATCATAGCGTGGTTTCCCATCTCCTGTA  
TGGCTTAGGCTCCAAGGTCTGTGAGTTAATGCTGTTATTACATCCCGATCTGTTTGTCTC  
ATCTTGATAGATAACTTCTGGCAAGAAAGAACAGACCACACTATTATTATACAGTTGAGGA  
AGCTCTAGAACTAGN

Sequence 5865:found Patent application W099/64594

CCGCGGTGGCGGCCGAGGTACCTCATTAGTAATTGTTTTGTTGTTTCAATTTTTTCTAAT  
GTCTCCCTCTACCAGCTCACCTGAGATAACAGAATGAAAATGGAAGGACAGCCAGATTT  
CTCCTTTGCTCTCTGCTCATTCTCTCTGAAGTCTAGGTTACCCATTTTGGGGACCCATTA  
TAGGCAATAAACACAGTTCCCAAAGCATTGGACAGTTTCTTGTGTGTTTTAGAATGGT  
TTTCTTTTTCTTAGCCTTTTCTGCAAAAGGCTCACTCAGTCCCTTGCTTGCTCAAGTG  
GACTGGGCTCCCCAGGGCCTAGGCTGCCTTCTTTTCCATGTCCCACCCATGAGCCCTCCA  
CTGGACAGCTCAGTAAGCCTGGCCCTTCACTTCTGCGCTGTGTTCTTCTCTGTGAAAATC  
CAATACCTCTTACNTCTCTGCATGCAAAGATTCTCAAGGATTGTCAGACTTCAAAACGT  
NACAGCAGAACCACCAGAAAGGTCCTATAAATGCAGNTAGTGGACCTTCTTCAAGCTGT  
CAGGGTCTTTTAAATAGGATTTGGGGGATATAATGGCTATTGTATTTTTTAAAGGGGAA  
GNAAATNAAGAGTTTGCTAGATTCTTAAAAAANGCCATGGTCTTTTTANCCAATTTNAAA  
AATNTTGGCCCCCACTTTTTTT

Sequence 7622:found in patent application W099/46374

097639260  
F04210 46375



Table 4-2

TCGAGCGGCCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTGGGATTTTTTAGGTAGT  
GGGTGTTGAGCTTG

Sequence 7623:found in patent application W099/51732

CGAGGTACGTTCTTCTTTCCAGTTTCTCTACCTTAGCTTATCCTCACCTCATTTTGC  
CCTGCTGGCTGCTCAAACATATGCAACAGATTGCGCATCCTCGCTTACCCATGGCCAGTT  
TGGAGGAACCTTCTACCTTCTCCTAACACATGGGGACCATTCCCAGTGAGACCTGTGAA  
TCCTGGCAACACAAATAGCTCTCAAAGCATAATAACACAAGCCGTCTACCTAACCAGAA  
CGGGACTGTTTTACCCTCAGAGTCTGCTGGACTAGCTACTGCCAGTTGTCCTATCACTGT  
CTCTTCTGTAGTTGCTGCCAGTCAGCAACTGTGTGTCTACTAATACCCGGACTCCTTCATC  
AGTCAGAAAGCAGTTGTTTGCCTGTGTGCCTAAGACAAGTCTCCAGCAACAGTGATTTT  
TTCTGTGACAAGCACTTGTAGTTCCCTGCCTTCTGTCTCCTCTGCACCTATCACTAGCGG  
GCAAGCTCCCACCACATTTCTACCTGCAAGTACCTGCCCC

Sequence 7624:found in patent application W099/42470

CCGCGGTGGCGGCCCGCCCGGGCAGGTACCGATACAGAAGAAGCTGCGTTTTGAAGACACC  
CTGGAGTTTGTAGGGTTTGTATGCGAAGATGGCTGAGGAATCCTCCTCCTCCTCCTCA  
TCTTCACCAACTGCTGCAACATCTCAGCAGCAGCAACTTAAAAATAAGAGTATATTAATC  
TCTTCTGTGGCTTCGGTGCATCATGCAACGGCCTAGCCAAATCTTCTACCACCGTCTCT  
AGCTTTGCTAACAGCAAACCTGGCTCTGTCTAAGAAGTTAGTGATCAAGAACTTTAAAGAT  
AAGCCTAAATTACCAGAAAACCTACACAGATGAAACCTGGCAAAAACCTGAAAGAAGCAGTG  
GAAGCTATTCAANAATAGTACCT

Sequence 7625:found in patent application W099/47669

CCGCGGTGGCGGCCCGAGGTCTATATGGACCACNAACATGGGAGCAGAAAAATGAGGGCAG  
CAGTGTCGAATCTCATTCCAGGTGAGAAGTTGCACAGTGTCCAATAGGTGCATACATCTC  
CTTAGTAAGTAGTTGTGATTAACAATGAAATAGAAATGAAAAATATATTTTTTTATTTAT  
GTGTATTATATTTTTCAAGCAGCTAATAAGTTGGTAGGACATAATATTTAATTCGTTGGG  
GACCTAATTATTTATAAATTGAATGGTTAGATATTTCTTTTGGCCTAAGCCACCATGAAA  
AAATCACTGAGGCGCTAAGGGAAACATTGAACTAAGAAGCCCTTCTGAGTCTCTGTTTTT  
TCAACTGTAAGATGAAGAAACCTGCTCCACCTTCCT

Sequence 7626:found in patent application W099/57132

CGCCCGGGGCAGGTACCTTAGTGAGGCTCAAAGGATTCTTTTGGGTCTATTTTACGCCT  
TATCTTTGAAATTACCACTCGGGTGAGAAAGGTGACATTGTAGTCTTTCTGGCCTGTGA  
ACAAGATATTGAGAAAGTCTGTGAAACTGTCTATCAAGGATCTAACCTAAACCCAGATCT  
TGGAGAACTGGTGGTTGTTCCCTTTGTATCCAAAAGAGAAATGTTTATTGTTCAAGCCACT  
CGATGAAACAGAAAAAGATGCCAAGTTTATCAAAGAAGAGTGGTGTAACTACTAGCTC  
TGGAGAGTTTTTGATCTGGAGCAACTCAGTCAGATTTGTTATCGATGTGGGTGTGGAAAA  
GAAAAAAGGTGTCCTCGGC

Sequence 7627:found in patent application W099/18208

CGAGGTACCTGTATGAGGTCTCCAGCCCGAAGGACTAGGCCAAGCCCTCTGTGTGCCAT  
CTCCAATGAGAAGGAATCCTGCCCTCACCTCACCTTTTCCAACCTGCCCAGGGAAGTGG  
AGGTTCCCTCTTTCCCTTTCTCTTGCAGGCCATCCATGACTTTAGAGAACAGACACAAGT  
GTATCCAGCTGTCCACGGGTGGAGCTACCCGTTGGGCTTATGAGTGACCTGGAGTGACAG  
CTGAGTCAACCTGGGTAAGTTCTCAGAGTGGTCAGGATGGCTTGACCTGCAGAAGATACC  
CAAGGTCCAAAAGCACGAAGGTCTGCGGAAAGTTCTGGTTGTGCGGTGGCACCACGGTTA  
CACCTATAATCGAGCACTTTGGGAGGCCAAGACAGGAGGATCGCTTGAGACCAAGAGTTT  
GAGCCTGCGGTGAAGCTGTGAATGCACCACGGCACTCAAGCCTGGCAATGTAGCAAGATC  
CTGTCTCTACAAGAAAAATTTTTTAAAAATGAGCCAAGTGTGGGGGTGCATGCCTGTAGTT  
TCCAGTACTTNAGGACACTTACNTANGANGGTTGGTTTGAAGTGAAGGTTGGAGGCT  
TGCAATNANCCTTGAATGCCCCANTGGCCTTCAACCTGGGGCGAAAAANAACCAAGACCCC  
ATNTTAAAAAANTNTNNGGTTNGNNATTGAATTGGGAAAAAAGCTTGG  
AGCTTTTTGCCTTTNNGCCNAGGNGANCATTGNAATTTGGGATTTNGAANGGAATGGG

Sequence 7628:found in patent application W099/40189

CCCTTAGCGTGGTTCGCGGCCGAGGTACCCGTTGCTGCTGCCATGTGTGTGCTTAAAAACAG  
GGTTCCTTTTTGTAGCATCAGAATTTGGAAACCATTACTTATATCAAATTGCACATCTTG  
GAGATGATGATGAAGAACCTGAGTTTTTCATCAGCCATGCCTCTGGAAGAAGGAGACACAT  
TCTTTTTTCAGCCAAGACCACTTAAAAACCTTGTGCTGGTTGATGAGTTGGACAGCCTCT  
CTCCATTCTGTTTTGCCAGATAGCTGATCTGGCCAATGAAGATACTCCACAGTTGTATG  
TGGCCTGTGGTAGGGGACCCGATCATCTCTGAGAGTCTTAAGACATGGACTTGAGGTGT

Table 4-2

CAGAAATGGCTGTTTCTGAGCTACCTGGTAACCCCAACGCTGTCTGGACAGTGCCTCGAC  
ACATTGAAGATGAGTTTGATGCCTACATCATTGTGTCTTTTCGTGAATGCCACCCTAGTGT  
TGGCCATTGGAGAACTGTAGAAGAAGTGACTGACTCTNGGTTCCCTGGGGACCAC

Sequence 7629:found in patent application W099/47669

AGGTACTCTCGTTTCAGCTGGGCTCTTATGGCCAACCGCTCGGCTTGCGCCCGCCGGGT  
TCCGGANTATATGTTGTATTTCGGCTGGGTCGAGGGTCTCAGGCAGAGTGCGCAGGCTCGA  
CGGCTTATACTTTGGGAACGACATCTTGGCGAACCAGGGCGCAATTGCGCCTGCGCGATT  
CTGAGGCCCTTTGTCTATGCTGACCTTCAGCTTCCCCCGGTACCTGCCCCG

Sequence 7630:found in patent application W099/57144

CCGCGGTGGCGGCCGCCCGGNCAGGTACGCGGGGCTGGGCGCGGGGAAGTGAAGCCGGA  
AGGGGCAAGACGGGCTCAGTTCGTTCATGGGGCTGTTTGGAAAGACCCAGGAGAAGCCGCC  
CAAAGAACTGGTCAATGAGTGGTCAATTGAAGGTAAGAAAAGGAAATGAGAGTTGTTGACA  
GGCAAATAAGGGATATCCANGAAAAAAAAAAAAAAAAAANAGTACCTT

Sequence 7631:found in patent application W099/53040

CGAATTGGAGCTCCACCCGCGGTGGCGGCCCGCCGGGCAGGTACTTTTTGCTTTAGCAG  
ATAGATAGGGCATCCAATACAACCTGATAACAAATTAATTTTATTTTCAA  
TAAAAGGAATGCTCTGGTTTTTTAACTGGCTCCTTGAGGAAGCCAGAAGATGGCATCTG  
CTCTTTAAACAGGCTTCTCTTATCTGATTTGAGACACAAATCCACCAAGATTCTTTCTTA  
CAGTGAAGTAGGCACACCCCTCAGATCACGAGGCCCTAGGAAGAAGCCTGTGGAAT  
CAGCCTGTGATGTGTGGTGGTGGGCCAGCACCTAGAAACACATGGTGGTTGTGCACATA  
AATCCCTTCAGCGGACTCAGTGAAGGATGAGAATTCTGAAAGTTCATGCACATTTTATT  
GAGTAGGTAATATAAAAATGCTTTTTCTTTTTTCATTTGTTACAAGTCATGCTTTGANTG  
CCCACCATNTTCAGAAGTCAAAATTACAAAAGG

Sequence 7632:found in patent application W099/53040

CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGCGGGGATGGGAGCCACGCCTGAACTAG  
AGTTTCAGGCTGGATACATGTGCTCACCTGCTGCTCTTGTCTTCCTAAGAGACAGAGAGTG  
GGGCAGATGGAGGAGAAGAAAGTGAGGAATGAGTAGCATAGCATTCTGCCAAAAGGGCCC  
CAGATTCTTAATTTAGCAAACCTAAGAAGCCCAATTAAAAAGCATTGTGGCTAAAGTCTAA  
CGCTCCTCTCTTGGTCAGATAACAAAAGCCCTCCCTGTTGGATCTTTTGAAATAAAACGT  
GCAAGTTATCCAGGCTCGTAACCTGCATGCTGCCACCTTGAATCCCAAGGAGTATCTGCA  
CCTGNAATANCTCTCCACCCCTCTCTGCCTCCTTACTTTCTGTGCAANATNACTTCTGG  
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TTTCCACAAATNGNCTTTGATTAACNTCTCTCTCCATGCCTNCAANCTCCAAATTT  
TTGGGGAAAGCTGTACCTTCANCCNCTCTAAACTAATGNATCCCCCGNCTNCAAGAAT  
TCNATATCAAACCTTATCAATACCNCTCACCTCAAAGGGGGGCCANTACCCAACCTTTN

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Table 5-1

Order	Clone	Gen Bank Accession Number
1	28106	R40780
2	30148	R41329
3	37408	R49695
4	37598	R51080
5	38554	R49731
6	40104	R54594
7	41850	R52786
8	42747	R61847
9	46365	H09774
10	46477	H09966
11	46694	H10192
12	47400	H10413
13	47652	H11433
14	50080	H17934
15	50486	H17618
16	50935	H18626
17	51378	H24011
18	51799	H23524
19	67237	T52700
20	69002	T54298
21	69935	T48692
22	81413	T60161
23	111812	T91225
24	120528	T95320
25	124447	R01094
26	127524	R08871
27	133864	R28660
28	136605	R35051
29	149288	R82644
30	151055	H02231
31	156962	R74321
32	196435	R91517
33	197651	R94504
34	200354	R96914
35	204483	H58234
36	205497	H57857
37	210697	H66840
38	249070	H80063
39	258300	N30680
40	258649	N32226
41	259950	N32587
42	266343	N26556
43	277173	N34316
44	278729	N62936
45	280375	N47113
46	293745	N65950

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**Table 5-1**

47	321834	W37112
48	344126	W73753
49	344190	W69741
50	344721	W74673
51	346308	W74133
52	396350	AA758375
53	399101	AA733027
54	413148	AA707871
55	415473	W80447
56	415610	W80730
57	415619	W80741
58	417393	W88942
59	418150	W90164
60	418206	W90529
61	418279	W90323
62	428560	AA005401
63	431408	AA706839
64	432479	AA699494
65	449428	AA777883
66	451596	AA707080
67	451911	AA706969
68	455275	AA677575
69	490484	AA101632
70	501431	AA115300
71	503741	AA131466
72	595318	AA164301
73	625875	AA186804
74	645565	AA204830
75	687297	AA235116
76	712950	AA282273
77	729953	AA412049
78	731218	AA416724
79	742049	AA401457
80	742569	AA400074
81	753745	AA410491
82	755304	AA436327
83	767289	AA418418
84	767823	AA418728
85	768217	AA424905
86	782233	AA431721
87	782503	AA431773
88	785663	AA449085
89	786525	AA452113
90	786602	AA478470
91	788180	AA453310
92	795499	AA454215
93	810873	AA459197
94	810987	AA485357
95	815183	AA481152

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96	815556	AA456821
97	824723	AA488986
98	839081	AA487608
99	840878	AA482324
100	841141	AA487031
101	845345	AA773478
102	884606	AA630006
103	897924	AA598808
104	950470	AA599102
105	1030855	AA621761
106	1049033	AA778675
107	1049185	AA620697
108	1049230	AA620715
109	1292432	AA718910
110	1323448	AA873604
111	1412481	AA845156
112	1416782	AA894557
113	1420370	AA857035
114	1468220	AA884897
115	1471841	AA873355
116	1472753	AA872402

FOI b7D, b7C, b7E

# Table 5-2

Order	Clone	Gen Bank Accession Number
1	629896	AA219045
2	897567	AA489611
3	856650	AA669314
4	897781	AA598517
5	882510	AA676460
6	586685	AA130579
7	769890	AA430382
8	525926	AA074511
9	714414	AA293215
10	812251	AA455056
11	192569	H41489
12	814989	AA465723
13	781089	AA430032
14	757265	AA426113
15	359661	AA011096
16	768562	AA429297
17	811062	AA485441
18	878676	AA775355
19	740941	AA478298
20	684655	AA251770
21	842863	AA489261
22	878798	AA670408
23	281010	N47691
24	135221	R32952
25	491751	AA150500
26	770879	AA434403
27	290841	N71982
28	291341	N72263
29	281003	N50880
30	785368	AA476576
31	45582	H08120
32	739511	AA478066
33	770043	AA427570
34	624627	AA187351
35	416833	W86653
36	359982	AA063521
37	669375	AA253464
38	744047	AA629262
39	451907	AA706968
40	757244	AA426025
41	453107	AA700904
42	755578	AA419177
43	502518	AA156802
44	773286	AA425299
45	843321	AA489569
46	278687	N62924

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T04270 22889450

Table 5-2

47	853006	AA668230
48	897529	AA497001
49	757165	AA443950
50	230971	R96155
51	796624	AA460530
52	38740	R51273
53	868757	AA775325
54	825372	AA504507
55	746245	AA417761
56	292399	N68399
57	626716	AA191548
58	489106	AA056538
59	22074	T66180
60	85800	T72067
61	705064	AA279990
62	277740	N49589
63	35300	R43798
64	788256	AA454098
65	746007	AA482007
66	455263	AA677572
67	277112	N39611
68	259591	N32768
69	22773	R38613
70	269997	N24910
71	451918	AA706964
72	345626	W72051
73	51041	H18633
74	32299	R42685
75	812266	AA455062
76	41391	R56123
77	878253	AA775791
78	83920	T64312
79	740604	AA479795
80	770066	AA430545
81	196189	R92281
82	46367	H09959
83	784772	AA478542
84	246430	N53031
85	310493	W31074
86	753162	AA400457
87	459941	AA779380
88	200814	R98851
89	415102	W95001
90	489677	AA099568
91	193892	H51765
92	359781	AA011320
93	812266	AA455062
94	277414	N34436
95	49284	H15533

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Table 5-2

96	66317	T66816
97	239611	H79534
98	502151	AA129777
99	773330	AA425450
100	266819	N24113
101	29063	R40970
102	785293	AA476543
103	824933	AA489040
104	345616	W72431
105	144816	R76281
106	291985	N73101
107	256907	N30096
108	487793	AA043501
109	840776	AA486082
110	199945	R97066
111	232946	H75599
112	197525	H52001
113	753467	AA406551
114	771303	AA443638
115	50879	H18424
116	341680	W60414
117	461727	AA682293
118	345793	W70128
119	486591	AA042990
120	345849	W70343
121	452374	AA700876
122	241699	H91641
123	262060	H99075

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